A SHORT

DISCOURSE

CONCERNING

Peſtilential Contagion,

~~A.~~ AND THE ~~988~~.

METHODS

To be uſed to Prevent it.

By *RICHARD MEAD*, M. D.
Fellow of the College of Phyſicians, and of the Royal Society.

The EIGHTH EDITION, with large Additions.

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TO THE

RIGHT HONOURABLE

James Craggs, Esq;

ONE OF

His MAJESTY's Principal Secretaries of State.

SIR,

I Most humbly offer to You my Thoughts concerning the *Prevention of the Plague*, which I have put together by your

Command. As ſoon as you was pleaſed to ſignify to me, in his *Majeſty's* Abſence; that their Excellencies the *Lords Juſtices* thought it neceſſary for the Publick Safety, upon the Account of the *Sickneſs* now in *France*, that proper Directions ſhould be drawn up to defend our ſelves from ſuch a Calamity; I moſt readily undertook the Task, though upon ſhort Warning, and with little Leiſure: I have therefore rather put down the *principal Heads of Caution*, than a *Set of Directions in Form.*

THE *first*, which relate to *the performing Quarantains*, &c. You, who are perfectly verſed in the Hiſtory of *Europe*, will ſee are agreeable to what is practiſed in other Countries, with ſome new Regulations. *The next*, concerning the *ſuppreſſing Infection here*, are very different from the Methods taken in former Times among *Us*, and from what they commonly Do *Abroad*: But, I perſuade my ſelf, will be found agreeable to Reaſon.

I MOST heartily wiſh, that the wiſe Meaſures, the *Government* has already taken, and will continue to take, with Regard to the *former* of *theſe*, may make the *Rules* about the *latter* unneceſſary: However, it is fit, we ſhould be always provided with proper *Means of Defence* againſt ſo terrible an *Enemy*.

MAY this ſhort *Eſſay* be received as one Inſtance, among many others, of the Care, you always ſhew for Your Country; and as a Teſti-

the First EDITION.

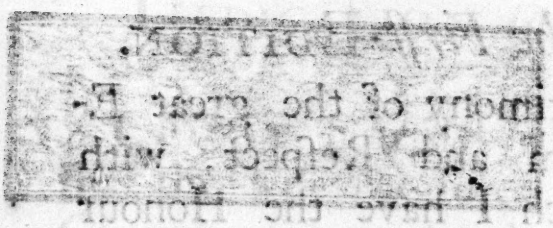
Teſtimony of the great Eſteem and Reſpect, with which I have the Honour to be,

SIR,

Your moſt obedient,

Moſt humble Servant,

Nov. 25. 1720. R. MEAD.



THE PREFACE.

WHEN I first wrote this Tract, I had not Time to enlarge so much on the Reasonableness of the Directions then given, nor to confirm them by so many Authorities, as otherwise I should have done. I have therefore at present, endeavoured to supply in some Measure these Defects, by adding a more full Description of the Plague, *and its Causes, and by collecting some Examples of good Success, from the putting in Practice such Measures as*

as I had preſcribed. I have likewiſe annex'd a ſhort Chapter relating to the Cure *of the* Plague, *being induced thereto, by conſidering how widely moſt Authors have erred in preſcribing that heap of* uſeleſs, *and very often* hurtful Medicines, *they include under the Titles of* Antidotes, Specificks, *and* Alexipharmacks; *and I hope the great* Reſemblance, *I have obſerved between the* Plague *and the* Small-Pox, *will juſtify my writing upon the* Cure *of a Diſeaſe, which I have never ſeen.*

I have now alſo inſiſted more at large, upon the Infection *of this Diſeaſe, than I could ever have thought needful at this time, after* Europe *has had Experience of the Diſtemper for ſo many Ages, had I not been ſurprized by the late Attempts of ſome Phyſicians in* France *to prove the contrary, even while they*

they have the moſt undeniable Arguments againſt them before their Eyes. In particular, I cannot but very much admire to ſee Dr. Chicoyneau, *and the other Phyſicians, who firſt gave us* Obſervations *on the* Plague, *when at* Marſeilles, *relate in the* Reflections, *they afterwards publiſhed upon thoſe Obſervations, the Caſe of a Man, who was ſeized with the* Plague, *upon his burying a young Woman dead of it, when no one elſe dared to approach the Body; and yet to ſee them aſcribe his Diſeaſe, not to his being* infected *by the Woman, but ſolely to his Grief for the Loſs of her, to whom he had made Love, and to a* Diarrhœa, *which had been ſome time upon him*. No queſtion but theſe concurred to make his Diſeaſe the more violent, and even ex-*

* Reflect. ſur la Maladie de *Marſeille &c. Aix*, p. 38, 39, 40.

poſed

poſed him to contract the Infection; *but why it ſhould be ſuppoſed, that he was not* infected, *I cannot imagine, when there was ſuch an Appearance of it. I am as much at a Loſs to find any Colour of Reaſon for their denying* Infection *in another Caſe, they relate, of a* young Lady *ſeized with the* Plague, *upon the ſudden Sight of a* PESTILENTIAL TUMOR, *juſt broke out upon her Maid; not allowing any Thing but the Lady's Surprize to be the Cauſe of her Illneſs*.*

THE Truth is, theſe Phyſicians had engaged themſelves in an Hypotheſis, *that the* Plague *was bred at* Marſeilles *by a long uſe of bad Aliment, and grew ſo fond of their Opinion, as not to be moved by the moſt convincing Evidence. And*

* Ibid. *p.* 113.

thus

thus it moſtly happens, when we indulge Conjectures inſtead of purſuing the true Courſe for making Diſcoveries in Nature.

I know they imagine this their Sentiment abundantly confirmed from an Experiment, indeed a very curious one, made by Dr. Deidier*, *of* Injecting *the* Bile, *taken from a Perſon dead of the* Plague, *into the* Veins *of a* Dog, *which in many Tryals never failed to produce in the* Dog, *all the Symptoms of the* Peſtilence, *even the* external *Ones of* glandular Swellings *and* Carbuncles. *One* Dog, *upon which the Experiment ſucceeded, had been known for three Months before, to de-*

* Journal de Sçavans du 9 *Fevrier*, 1722. *and* Obſervations ſur les Cauſes de la Peſte de *Marſeille*, & ſur la maniere dont cette Maladie ſe communique, par M. *Deidier*, *Robert* & *Rimbaut*, en MS.

vour the Fleſh *of* infected *Perſons, and* Pledgets *taken from* Peſtilential Ulcers, *without receiving any Injury.*

I wiſh, ſince it was deſigned to build Reaſonings upon theſe Experiments, *that Tryal had been made, what Effect the* Bile *would have had, when taken into the Stomach of a* Dog; *and likewiſe, what the Reſult would have been of injecting into the Veins, other* Juices *of the Body, beſides the* Bile, *and alſo the* Matter *flowing from the* Peſtilential Ulcers: *For it cannot be certainly concluded, that the* Bile *would have the ſame Effect, what ever Way conveyed into the Body; ſince we know ſome* Poyſons *very powerful, when mixed immediately with the* Blood, *that will not operate in the* Stomach *at all; as in particular, the* Venom *of the* Viper, *which however deſtructive in a*

Wound,

Wound *may be ſwallowed into the* Stomach *without harm* *. *And perhaps, on the other hand, ſome other* Juices *of the Body beſides the* Bile, *particularly the* Matter *of the* Buboes *or* Carbuncles, *injected into the Veins, might have given the Diſeaſe; as we ſee* Infection *is communicated by the* Matter *of the* Puſtules *in the Experiment of* Inoculating *the* Small-Pox. *This further Proſecution of the* Experiments *would have been the more acceptable to me, becauſe it would in ſome Meaſure have decided, whether I have conjectured right, in both the Methods I have aſſigned for the receiving* Infection; *for if thoſe* Juices *had been found to give the Diſeaſe, when mixed immediately with the* Blood, *which were unhurtful in the* Stomach, *it would ſeem moſt probable, that*

* *Vid.* Mechanical Account of Poiſons, *p.* 24.

Infection

Infection *is ordinarily received by the* Lungs, *rather than the other Way; though it will not be adviseable to neglect the* Cautions *grounded upon either of these* Conjectures, *till it shall be found, that* Men *as well as* Dogs, *may take such Substances into the* Stomach *without Injury.*

BUT to let this pass, their Method of arguing upon these Experiments is this; because the* Bile *is found to* infect *Dogs, who do not receive any Injury from* Men, *in the manner* Men *are supposed to do from one another; therefore they not only conclude, that the* Bile *is more eminently corrupted, than the other* Juices *of the Body, (which is the most that can be collected from thence) but they likewise gather, that Men do*

* The fore-cited Manuscript.

not

not catch the Diſtemper, after the manner commonly thought; that the Bile *is firſt diſordered, and that this Diſorder muſt needs be brought about by unwholſome Diet, which they ſuppoſe moſt immediately to affect the* Bile. *So haſtily do they draw Concluſions. But it is neither certain, that an unwholſome Diet corrupts the* Bile *more immediately than the other* Humours; *nor yet, that the* Bile, *becauſe moſt eminently corrupted, muſt therefore by its Corruption, give riſe to the Diſeaſe. As the Diſtemper operates by giving to the* Blood *and* Humours, *a preternatural Acrimony, it is not ſtrange, if it have the greateſt Effect upon thoſe* Humours, *which are naturally the moſt Acrid; but this by no means proves, that the* Bile *can be ſo corrupted, as to breed the Diſeaſe without any* Infection *received. And it is no Conſequence, that becauſe* Dogs *do not catch the* Plague, *by*

approaching Men *ill of it, therefore* Men *cannot contract it by converſing with the* Sick. *Contrarywiſe, ſince there are* Humours *of the human Body, that will communicate the Diſeaſe to Animals of a* different Species, *not ordinarily ſubject to it, it heightens the Probability, that Men ſhould give it to their own* Species *by the* Fumes *emitted from them in the Courſe of their Diſtemper.*

MY Aſſertion, that theſe French *Phyſicians have before them the fulleſt Proofs of this* Infection, *not only appears from theſe Inſtances of it, I have obſerved to be recorded by themſelves; but likewiſe from what Dr.* le Moine *and Dr.* Bailly * *have written, of the manner in which the* Plague *was brought to* Canourgue *in the* Gevaudan; *as alſo from an amaz-*

* *Vid.* Lettre de Meſſieurs *le Moine* & *Bailly.*

ing

ing Inſtance they give us of the great Subtilty of this Poiſon, *experienced at* Marvejols, *where no leſs than* ſixty *Perſons were at once infected in a* Church, *by one that came thither out of an infected Houſe. The* Plague *was carried from* Marſeilles *to* Canourgue, *as follows. A* Galley-Slave *employed in burying the Dead at* Marſeilles, *eſcaped from thence to the Village of* St. Laurent de Rivedolt, *a League diſtant from* Correjac, *where finding a Kinſman, who belonged to the latter Place, he preſented him with a* Waſtcoat *and a* pair of Stockings *he had brought along with him. The* Kinſman *returns to his Village, and dies in two or three Days; being followed ſoon after by* three Children *and their* Mother. *His* Son, *who lived at* Canourgue, *went from thence, in order to bury the Family, and at his Return, gave to his* Brother-in-law *a* Cloak *he had brought*

with him; the Brother-in-law *laying it upon his Bed, loſt a little* Child *which lay with him, in one Day's Time; and two Days after his* Wife; himſelf *following in ſeven or eight. The* Parents *of this unhappy Family, taking Poſſeſſion of the* Goods *of the Deceaſed, underwent the ſame Fate.*

ALL this abundantly ſhews how inexcuſable the foreſaid Phyſicians in France *are, in their oppoſing the common Opinion that the* Plague *is* contagious. *However, I have paid ſo much Regard to them, as to inſiſt the more largely upon the Proof of that* Contagion, *leaſt the Opinion of theſe, who have had ſo much Experience of the Diſeaſe, might lead any one into an Error, in an Affair of that Conſequence, that all my Precepts relating to* Quarantains, *and well nigh every particular Part of my Advice, depends upon it. For if*

this Opinion were a Miſtake, Quarantains, *and all the like* Means of Defence, *ought to be thrown aſide as of no uſe. But as I continue perſuaded, that we have the greateſt Evidence, that the* PLAGUE *is a* contagious *Diſeaſe, ſo I have left, without any Alteration, all my Directions in reſpect to* Quarantains; *in which, I hope, I have not recommended any Thing* prejudicial to Trade; *my Advice being very little different from what has been long practiſed in all the* trading *Ports of* Italy, *and in other Places. Nay, were we to be more Remiſs in this than our Neighbours, I cannot think but the* Fear *they would have of us, muſt much obſtruct our* Commerce.

IN a Word, in making this Review of my Book, I have not found Reaſon to alter my Opinion, in regard to any of the Precepts *delivered*

therein, whether in Relation to Quarantains for keeping the Plague out of a Country, or in regard to the Treatment of the Diſeaſe, when preſent; but on the contrary, I am ſtill more convinced, that they are perfectly ſuitable to the Nature of the Diſtemper; and conſequently, in general, the fitteſt to be complied with. But how far, in every Situation of Affairs, it is expedient to grant the Powers, *requiſite for putting all of them in Practice, it is not my proper Buſineſs, as a Phyſician, to determine. No doubt, but at all Times, theſe* Powers *ought to be ſo limited and reſtrained, that they may never endanger the Rights and Liberties of a People. Indeed, as I have had no other View than the Publick Good in this my Undertaking, and the Satisfaction of doing ſomewhat towards the Relief of Mankind, under the greateſt of Calamities; ſo I ſhould not,*

without

without the utmoſt Concern, ſee that any Thing of mine, gave the leaſt Countenance to Cruelty and Oppreſſion.

BUT I muſt confeſs, I find no Reaſon for any Apprehenſions of this kind, from any thing I have advanced. For what extraordinary Danger can there be, in lodging Powers *for the proper Management of People, under the Plague, with a* Council of Health, *or other Magiſtrates, who ſhall be accountable like all other Civil Officers, for their juſt Behaviour in the Execution of them? Though this I muſt leave to thoſe, who are better skilled in the Nature of Government. But ſure I am, that by the Rules here given, both the* Sick *will be provided for with more Humanity, and the Country more effectually defended, againſt the Progreſs of the Diſeaſe, than by*

any of the Methods heretofore generally put in Practice, either in our own, or in other Nations.

THE Usage among Us, *established by* Act of Parliament, *of* Imprisoning *in their Houses, every Family the* Plague *seizes on, without allowing any one to pass in or out, but such as are appointed by Authority, to perform the necessary Offices about the Sick, is certainly the severest Treatment imaginable; as it exposes the whole Family to suffer by the same Disease; and consequently is little less than assigning them over to the cruellest of Deaths. Under these Circumstances, every one, who is so unfortunate, as first to bring the Disease into any House, must have the insupportable Anxiety and Dejection of Spirit, which so remarkably attends this Distemper, still further heightened by the melancholy Re-*

flexion

ſlexion of having involved his deareſt Relations and Friends, in the ſame Deſtruction with himſelf. In ſhort, the Diſeaſe, for every ſingle Perſon *it would otherwiſe carry off, is made by this Management, to ſweep away* entire Families.

THE Methods practiſed in France *are likewiſe obnoxious to great Objections.* Crowding *the* Sick *together in* Hoſpitals *can ſerve to no good purpoſe; but inſtead thereof will* promote *and* ſpread *the* Contagion, *and beſides, will expoſe the Sick to the greateſt Hardſhips. It is no ſmall Part of the Miſery, that attends this terrible Enemy of Mankind, that whereas moderate Calamities open the Hearts of Men to* Compaſſion *and* Tenderneſs, *this greateſt of Evils is found to have the contrary Effect. Whether Men of wicked Minds, through Hopes of Impunity,*

punity, at these Times of Disorder and Confusion, give their evil Disposition full Scope, which ordinarily is restrained by the Fear of Punishment; or whether it be, that a constant View of Calamities and Distress, does so pervert the Minds of Men, as to blot out all Sentiments of Humanity; or whatever else be the Cause, certain it is, that at such Times, when it should be expected to see all Men unite in one common Endeavour, to moderate the publick Misery; quite otherwise, they grow regardless of each other, and Barbarities are often practised, unknown at other Times. Accordingly Diemerbroek *informs us, that he himself had often seen these* Hospitals *committed to the Charge of Villains, whose Inhumanity has suffered great Numbers to perish by Neglect, and that sometimes they have even smothered such as have been very weak,*

or

*or have had nauſeous Ulcers difficult to Cure. Inſomuch, that in many Places the Sick have choſe to lay themſelves in Fields, in the open Air, under the ſlighteſt Coverings, rather than to fall into the barbarous Hands of thoſe, who have had the Management of theſe Hoſpitals *. To conclude, though* carrying away *the Sick out of a Town at firſt, while their Number is ſmall, is the only probable Way of ſtopping the Diſeaſe, by removing the* Cauſe *of* Infection; *yet if this fails, and the Diſtemper has ſpread, notwithſtanding, into all Quarters, it can no longer be of any Service; and therefore the further Continuance of that Practice, ought utterly to be condemned.*

THE rigorous Reſtraints obſerved at their Lines, *are attended alſo*

* *Diemerbroek* de Peſt. *p.* 120.

with

with the like Inconveniences; for by abſolutely denying a Paſſage to People from infected *Places, they ſubject to the ſame common Ruin, both from the Diſeaſe, and from the Diſorders committed in ſuch Places, thoſe, whoſe Fortunes would otherwiſe furniſh with Means of eſcaping; and this, no doubt, in every free Country, muſt be looked upon as an unjuſt* Infringement of Liberty, *and a Diminution of Men's natural Rights, not to be allowed.*

NOW, under all theſe Difficulties, I cannot, without the greateſt Pleaſure obſerve, that my Precepts *are well nigh, nay altogether free from them; and yet a proper Regard is had to the Diſeaſe. As ſoon as ever the* Sick *are grown numerous, I adviſe, that they be left in their Houſes, without any of thoſe unmerciful Reſtraints heretofore put*

upon

upon them, and the Families they belonged to. I might, perhaps, have juſtly directed, that whenever thoſe, who frequent or dwell in an infected Houſe go abroad, they ſhould be obliged to carry about them a long Stick of ſome remarkable Colour, or other viſible Token, by which People may be warned from holding too free Converſe with them; this being the Practice on theſe Occaſions, as I have heard, in ſome Places. The Removal of the Sick, from their Houſes, I adviſe only at the beginning, when it will be attended with none of the forementioned Inconveniences; but is what, for the moſt Part, thoſe Sick ſhould themſelves deſire. It has hardly ever been known, when the Diſeaſe did not firſt begin among the Poor. Such therefore only will be ſubject to this Regulation; whoſe Habitations by the Cloſeneſs of them are in all Reſ-

pects

pects very incommodious for diſeaſed Perſons. So that my Advice chiefly amounts to the giving Relief to the Poor, *who ſhall firſt be* infected, *by removing them into more convenient Lodgings than their own, where they ſhall be better provided for than at home. And the* Removal *of them will not be attended with that Danger, it is natural for the unſkilful to apprehend in ſo dreadful a Diſeaſe; becauſe it is every Day practiſed in the* Small-Pox, *with great Safety. And whereas, I have before obſerved, that People have often ſuffered in the publick* Hoſpitals *by the Inhumanity of their Attendants; in this Caſe, little or nothing of that kind is to be feared; for I have propoſed this* Removal *of the* Sick *only, at a Time, when a long* Series *of* Calamities *has not yet bred Diſorders and Hardneſs of Heart. Nay, it may be reaſonably expected that they ſhould rather*

be

be uſed with the tendereſt Care, when every one ſhall believe the Stopping of the Diſtemper, and conſequently their own Safety to depend upon it. And as this Treatment will be both ſafe and beneficial to the Sick, *ſo it will be much more evidently for the Advantage of the* ſound *Part of the Family, and of thoſe who live near them. For as the* poorer *Sort of People, ſubſiſt by their daily Labour, no ſooner ſhall the* Plague *have broke out among them, but the Sick Families, and all their Neighbours likewiſe, if not relieved by the Publick, ſhall be abandoned to periſh by* Want, *unleſs the Progreſs of the Diſtemper put a ſhorter Period to their Lives.*

THIS Obſervation, that the Plague *uſually begins among the* Poor, *was the Reaſon, why I did not make any Difference in my Directions for* remov-

removing the Sick, *in regard to their different Fortunes, when I first gave my Thoughts upon this Subject; which however, to prevent Cavils, I have at present done; and have shewn what Method ought to be taken, if by some unusual Chance, the* Plague *should at the beginning enter a wealthy Family; and, in this Case, I have advised nothing, which I would not most readily submit to my self: For I should much rather chuse to be thus removed from my Dwelling, with the Distemper upon me, to save my Family, than they, by being shut up with me, should be all exposed to Perish. And as this Way of treating diseased Families, is the most compassionate, that can be devised with any regard to the restraining the Progress of the Distemper; so it is still much preferable to what was formerly practised amongst us, on other Accounts. For, according to what I*

have

have adviſed, it is only required, to remove ſome few *Families at the beginning of the Diſeaſe; whereas the Method of* ſhutting up *Houſes, was continued through the whole Courſe of the Sickneſs. Perhaps the Plague under this Management, may not reach half a Score Families: I have given Inſtances, where it has thus been ſtopt in* One.

WHAT relates to the incloſing In-fected *Places with* Lines, *I have ſo regulated, that no body can be ſubjected to any Degree of Hardſhip thereby; for I have provided, that free Liberty be given to every one, that pleaſes, to depart from the* Infected *Place, without being put to any other Difficulty, than the Performance of a ſhort* Quarantain *of about three Weeks, in ſome Place of Safety. So that no one ſhall be compelled to continue in the* infected

Town, whom his own Circumſtances will not confine.

THIS part of my Directions is not ſo general *as the reſt, becauſe ſome Places are too great to admit of it, which occaſioned my propoſing it with a Reſtriction*. But as this is a great Inconvenience to the reſt of the* Country, *ſo it is far from being any Advantage to the* Place *thus left unguarded. For when all, who leave an* infected *Place, carry with them* Certificates *of their having ſubmitted to ſuch* Quarantain, *as may remove all Cauſe of Suſpicion,* Travelling *will be much more ſafe and commodious, than otherwiſe it can be. For want of this, when the* Plague *was laſt at* London, *it was difficult to withdraw from it, while the* Country *was every where afraid of* Strangers, *and*

* *Where it can be done,* pag. 53. of the firſt Edition; of this, *pag.* 128.

the

the Inns *on the* Roads *were unſafe to lodge in for thoſe, who travelled from the* City, *when it could not be known, but* Infection *might be received in them, by others come from the ſame Place.*

THAT this is a great inconvenience to the reſt of the Country, it cannot be doubted; for it muſt be owned, that the Plague *now in* France *has been much reſtrained by their Endeavours. The Diſeaſe has been with them ſo exceeding violent, that had no Means been uſed to check it, nothing leſs could have been expected, than that it ſhould have ſpread over the whole Country before this Time. Since the* Plague, *when laſt in* England, *though much more moderate, and though it continued not above one Year in the City of* London, *did yet ſpread it ſelf over a great Part of* England, *getting into*

Kent, *even as far as* Dover; *into* Suſſex, Hampſhire, Dorſetſhire, Eſſex, Suffolk, Norfolk, Cambridgeſhire, Northamptonſhire, Warwickſhire, Derbyſhire, *and, to mention no more, as far as* Newcaſtle*.

THUS, as I have examined through the Courſe of the following Treatiſe, *with all poſſible Care, in-to the Agreement of my* Precepts, *with the Nature of the* Plague; *ſo I have in this* Place, *made ſome Enquiry, how far they can conveniently be put in Practice.*

AND I leave it to any impartial Judge to determine, whether theſe Advices, *are not the moſt proper of any yet thought of, for the Publick to enact Laws upon. But the making of Theſe, is out of my Pro-*

* *Vid.* the *Gazettes* of the Years 1665. and 1666.

vince.

vince. And it may, perhaps, at ſome Times, for Reaſons, with which I ſhall not pretend to meddle, be neceſſary to give Way to popular Prejudices *and* Clamours, *and reject even the* beſt Laws *that can be made; more eſpecially when the Danger is at a Diſtance; but ſhould the* Plague *come among Us (which God avert) I make no queſtion, but the* Voice *of the People, and the* Wiſdom *of the Nation, would concur in taking Meaſures not very different from Theſe I have preſcribed, at leaſt in* annulling *the* Orders *of former Times, which were certainly inhumane and deſtructive.*

BUT it is time to have done with a Subject by no means agreeable, and in which, I ſhould never have engaged, with any other View than that of doing Service to my Country in this Time of Danger.

I ſhall therefore conclude all I have to ſay upon this Matter, with a Paper *well deſerving Peruſal, which is come to my Hands, ſince the following Sheets were finiſhed; and therefore too late to be made uſe of in its proper Place; for which Reaſon, I ſhall give it here entire. This* Paper *contains the Methods taken by his preſent* Majeſty, *when the* Plague, *nine or ten Years ago, had entered his* Dominions *in* Germany. *It was delivered to me from Mr.* Backmeiſter, *the preſent Secretary at* Hanover *to his* Majeſty *for the* German *Affairs, who was the Perſon, that iſſued out the* Orders *that were given. This* Relation *I requeſted from the Secretary, being deſirous to know how far the* Meaſures *then taken, agreed with my* Directions, *becauſe I had been informed, that they were very ſucceſsful. And I have*

the

the Satisfaction to find them very conformable to my Precepts; *and that they had ſo much the deſired Effect, as to ſtop the* Plague *from ſpreading beyond the ſmall Number of* Towns *and* Villages *recited at the beginning of the* Paper.

HANOVER, *Feb.* 10. *N. S.* 1722.

IN 1712 *and* 1713, *the Plague raged in theſe Parts, at the following Places.*

TOWNS.

Lunenbourg, Haarbourg, *twice.*
Zell,

VILLAGES.

Nienfeldt, Trebel,
Holdenſtedt, Brinckem,
Melle, Goldenſtedt,
Bienenbuttel, Fallingboſtel.
Achem,

IN the last Place, *three labouring Men who had made their Escape from* Hamburgh, *got into a Barn in the Night, and were found dead there the next Morning, with Marks of the Plague upon them; but the Progress of the Infection was stopt by burning the Barn.*

AS soon as any Village was infected, the first Thing done was to make a Line *round it, thereby to hinder the Inhabitants from communicating with others. Those who were thus shut up, were immediately furnished with Provisions; a Physician was sent to them; and especially some Surgeons; a Minister to Officiate particularly to Persons infected; a Nurse; Buriers; &c.*

THE principal Management of this whole Affair, consisted in two Things:

Things: 1. *In* separating *the Sick from the Sound; and* 2. *In* cleaning *well the Houſes which had been infected.*

WHEN any Perſon was taken ill, he was obliged to leave his Lodging, and retire into a Lazaretto or Hoſpital, built for that Purpoſe. The other Perſons who appeared to be well in the ſame Houſe, were obliged, when it was practicable, to ſtrip themſelves in the Night quite naked, to put on other Clothes, which were provided for them, and to go to perform Quarantain in a Houſe appointed for it, after having burnt the Clothes, they had put off. Perſons were made to change their Clothes, and thoſe they put off were burnt, as often as was judged neceſſary: For Example, this was done when thoſe who had recovered their Health, came out of the Lazaretto and went into

Quaran-

Quarantain; and likewiſe, when (after the Diſeaſe was ceaſed) the Women who attended the Sick, the Buriers, and Surgeons, went into Quarantain.

IN Summer, ordinary Barracks *(or Huts) were made for thoſe of the common People, who were obliged to quit infected Houſes, which Barracks were afterwards burnt when they had been made Uſe of.*

AS ſoon as the People were come out of an infected Houſe, it was nailed up, and Centinels were poſted there, that nothing might be ſtolen out of it. In the Country, when ſuch a Houſe was not of very great Value, and it might be done without Danger, it was burnt, *and the Loſs was made good to the Owner, at the Expence of the Publick; but in Towns, where this could not be done, without the*

Hazard

Hazard of burning the Town, Men were hired to go into the Houſes, and bring into the Court-Yard, or before the Houſe, whatever Goods they found in it ſuſceptible of Contagion, and there burn *them; but to prevent the Fright which this might raiſe among the Neighbours, ſuch Goods were ſometimes put into the Cart, uſed to carry off dead Bodies, and ſo conveyed out of the Town and burnt. At firſt, the Method taken, was only to* bury *ſuch Goods deep in the Ground; but it was found by ſeveral Examples, that they were dug up again, and that the Infection was thereby renewed. Before People were paid for their Houſes and Effects, that were burnt, it was diſcovered, that they often laid ſome of their Goods out of the Way, and that the Contagion was ſpread by them; but after they came to be paid what was reaſonable, by the Publick, they willingly*

willingly let all be burnt, without concealing any thing.

IN Summer, the Cattle were left abroad, and the Inhabitants, who had not the Plague in their Houſes were obliged to look after them: In Winter, the Sound Perſons were obliged, before they left an infected Houſe, to kill the Cattle belonging to it, and to bury them ten Foot deep in the Ground near the Houſe.

PART

PART I.
Of the PLAGUE in general.

CHAP. I.
Of the Origine and Nature of the Plague.

MY Deſign in this Diſcourſe being to propoſe what Meaſures I think moſt proper to defend the Nation againſt its preſent Danger from the *Plague*, and for this End to

conſider the Nature of *Peſtilential Contagion* as far as is neceſſary to ſet forth the Reaſonableneſs of the Precepts I ſhall lay down; before I proceed to any particular Directions, I ſhall enquire a little into the Cauſes, whence the *Plague* ariſes, and by what Means the Infection of it is ſpread.

In the moſt ancient Times *Plagues*, like many other Diſeaſes, were looked upon as *divine Judgments* ſent to puniſh the Wickedneſs of Mankind, and therefore the only Defence ſought after was by Sacrifices and Luſtrations to appeaſe the Anger of incenſed Heaven *.

How much ſoever may be ſaid to juſtify Reflexions of this Kind,

* Celſus de Medic. in Præfat. Morbos ad iram deorum immortalium relatos eſſe, & ab iisdem opem poſci ſolitam.

ſince we are aſſured from ſacred Hiſtory, that divine Vengeance has been ſometimes executed by *Plagues*; yet it is certain, that ſuch Speculations puſhed too far, were then attended with ill Conſequences, by obſtructing Inquiries into natural Cauſes, and encouraging a ſupine Submiſſion to thoſe Evils; againſt which the infinitely good and wiſe Author of Nature has in moſt Caſes provided proper Remedies.

Upon this Account, in After-Ages, when the Profeſſion of Phyſick came to be founded upon the Knowledge of Nature, *Hippocrates* ſtrenuouſly oppoſed this Opinion, that *ſome particular Sickneſſes were Divine, or ſent immediately from the Gods*, and affirmed, that *no Diſeaſes came more from the Gods than others, all coming from them, and*

yet all owning their proper natural Cauſes; that the Sun, Cold, and Winds were divine; *the Changes of which, and their Influences on human Bodies, were diligently to be conſidered by a Phyſician* *.

WHICH general Poſition this great Author of Phyſick intended to be underſtood with reſpect to *Plagues* as well as other Diſtempers: How far he had reaſon herein, will in ſome meaſure appear, when we come to ſearch into the Cauſes of this Diſeaſe.

BUT in order to this Enquiry, it will be convenient, in the firſt place, to remove an erroneous Opinion ſome have entertained, that the *Plague* differs not from a *common Fever* in any thing beſides its great-

* Libr. de Morbo Sacro; & Libr. de Aere locis & aquis.

er

er Violence. Whereas it is very evident, that ſince the *Small-Pox* and *Meaſles* are allowed to be Diſtempers diſtinct in *Species* from all others, on account of certain Symptoms peculiar to them; ſo, for the ſame reaſon, it ought to be granted, that the *Plague* no leſs differs in Kind, from ordinary Fevers: For there are a Set of diſtinguiſhing Symptoms as eſſential to the *Peſtilence*, as the reſpective Eruptions are to the *Small-Pox* or *Meaſles*.

As the *Small-Pox* diſcharges itſelf by *Puſtules* raiſed in the Skin; ſo in the *Plague* the noxious Humour is thrown out either by *Tumors* in the Glands, as by a *Parotis*, *Bubo*, and the like; or by *Carbuncles* thruſt out upon any part of the Body. And theſe Eruptions are ſo ſpecific Marks of this Diſtemper, that one of them is never ab-

ſent; unleſs through the extreme Malignity of the Diſeaſe, or Weakneſs of Nature, the Patient ſinks, before there is time for any Diſcharge to be made this way; that Matter, which ſhould otherwiſe have been caſt out by external *Tumors* ſeizing the *Viſcera*, and producing *Mortifications* in them.

Sometimes indeed it happens, by this means, that theſe *Tumors* in the Glands, and *Carbuncles*, do not appear; juſt as a bad kind of the *Small-Pox* in tender Conſtitutions ſometimes proves fatal before the *Eruption*, by a *Diarrhœa*, *Hæmorrhage*, or ſome ſuch Effect of a prevailing Malignity.

The *French* Phyſicians having diſtinguiſhed the Sick at *Marſeilles* into five *Claſſes*, according to the Degrees of the Diſtemper, obſerved

glandular *Tumors*, and *Carbuncles*, in all of them, except in thoſe of the *firſt Claſs*, who were ſo terribly ſeized, that they died in a few Hours, or at fartheſt in a Day or two, ſinking under the Oppreſſion, Anxiety and Faintneſs, into which they were thrown by the firſt Stroke of the Diſeaſe; having Mortifications immediately produced in ſome of the *Viſcera*, as appeared upon the Diſſection of their Bodies *. And this Obſervation of the *French* Phyſicians, which agrees with what other Authors have remarked in former *Plagues*, fully proves, that theſe Eruptions are ſo far from being cauſed ſolely by the greater *Violence* of this Diſeaſe, than of other Fevers, that they are only abſent, when the Diſtemper is extra-

* Obſervat. & Reflex. Touchant la Nature, &c. de la Peſte de Marſeilles, pag. 47. & ſuiv.

ordinary fierce; but otherwiſe they conſtantly attend it, even when it has proved ſo mild, that the firſt Notice, the Patient has had of his Infection, has been the Appearance of ſuch a *Tumor*; as, beſides theſe *French* Phyſicians, other Authors of the beſt Credit have aſſured us. From whence we muſt conclude, that theſe *Eruptions* are no leſs a ſpecific Mark of this Diſeaſe, than thoſe are, by which the *Small-Pox* and *Meaſles* are known and diſtinguiſhed.

And this in particular ſhews us the difference between the true *Plague*, and thoſe *Fevers* of extraordinary Malignity, which are the uſual Forerunners of it, and are the natural Conſequence of that ill State of Air, we ſhall hereafter prove to attend all *Plagues*. For ſince all thoſe Fevers, from which People recover

 without

without any Diſcharge by Tumors in the Glands, or by *Carbuncles*, want the *characteriſtic* Signs, which have been ſhewn to attend the ſlighteſt Caſes of the true *Plague*, we cannot, upon any juſt Ground, certainly conclude them to be a leſs Degree only of that Diſtemper; but, as far as appears, they are of a different Nature, are not ordinarily *Contagious* like the *Plague*, nor yet have any ſuch neceſſary Relation to it, but that ſuch Fevers do ſometimes appear, without being followed by a real *Peſtilence*.

On the other hand, I would not be underſtood to call every *Fever* a *Plague*, which is followed by Eruptions reſembling theſe here mentioned: For as every *Boil* or *Puſtule*, which breaks out upon the Skin, is not an Indication of the *Small-Pox*, nor every Swelling in the

the *Groin* a *Venereal Bubo*; ſo there are *Carbuncles* not Peſtilential, and other Fevers, beſides the *Plague*, which have their Criſis by *Tumors* and *Abſceſſes*, and that ſometimes even in the *Parotid* or other Glands. There is indeed uſually ſome difference between theſe Swellings in the *Plague*, and in other Fevers, eſpecially in the time of their coming out; for in the *Plague* they diſcover themſelves ſooner than in moſt other Caſes. But the principal difference between theſe Diſeaſes, is, that the Plague is infectious, the other not.

And this leads me to another Character of this Diſeaſe, whereby it is diſtinguiſhed from ordinary Fevers, which is the *Contagion* accompanying it. This is a very ancient Obſervation. *Thucydides* makes it a part of his Deſcription of the

Plague

Plague at *Athens* *; and *Lucretius*, who has almost translated this Description

* Lib. 2. Ὅτι ἕτερος ἀφ' ἑτέρου, θεραπείας ἀναπιμπλάμενοι, ὥσπερ τὰ πρόβατα ἔθνησκον· καὶ τὸ πλεῖστον φθόρον τοῦτο ἐνεποίει· εἴτε γὰρ μὴ θέλοιεν δεδιότες ἀλλήλοις προσιέναι, ἀπώλλυντο ἔρημοι, καὶ οἰκίαι πολλαὶ ἐκενώθησαν ἀπορίᾳ τοῦ θεραπεύσαντος· εἴτε προσίοιεν, διεφθείροντο, καὶ μάλιστα οἱ ἀρετῆς τι μεταποιούμενοι. The beginning of this Passage, as it here stands, though it is found thus in all the Editions of *Thucydides*, is certainly faulty, θεραπείας ἀναπιμπλάμενοι being no good Sense. The Sentence I shall presently cite from *Aristotle* gives room to conjecture, that this may be rectified only by removing the Comma after ἑτέρου, and placing it after θεραπείας; for προσαναπίμπλημι in *Aristotle* absolutely used signifies *to infect*. However, if this be not thought sufficient, we may receive farther Assistance in correcting it from an Expression *Plutarch* uses in his Life of *Pericles*, where he describes the same *Plague* that *Thucydides* does: His words are, ἀλλ' ὅλοι, ὥσπερ βοσκήματα καθειργμένους, ἀναπίμπλασθαι φθορᾶς ἀπ' ἀλλήλων. Hence we might be induced to change θεραπείας into φθορᾶς, or rather to retain both words, supposing φθορᾶς to have been omitted by some Transcriber from its Similitude in Letters to the other word. If so, we must read the whole Sentence thus, ὅτι ἕτερος ἀφ' ἑτέρου θεραπείας, φθορᾶς ἀναπιμπλάμενοι, &c.

In

ſcription of *Thucydides*, dwells much upon it *. *Ariſtotle* makes it one

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In either Correction, the Senſe of the Place will be as follows: *The People took Infection by their Attendance on each other, dying like Folds of Sheep. And this Effect of the Diſeaſe was the principal Cauſe of the great Mortality; for either the Sick were left deſtitute, their Friends fearing to approach them, by which means Multitudes of Families periſhed without Aſſiſtance; or they infected thoſe who relieved them, and eſpecially ſuch, whom a Senſe of Virtue and Honour obliged moſt to their Duty.*

THE Senſe here aſcribed to the word ἀναπίμπλημι, is confirmed yet more fully by a Paſſage in *Livy*, where he deſcribes the Infection attending a Plague or Camp Fever, which infeſted the Armies of the *Carthaginians* and *Romans* at the Siege of *Syracuſe*, in ſuch words, as ſhew him to have had this Paſſage of *Thucydides* in view; for he ſays, *aut neglecti deſertique, qui incidiſſent, morerentur; aut aſſidentes curantesque eadem vi morbi repletos ſecum traherent.* Lib. 25. c. 26.

* L. 6. ℣. 1234.

——nullo ceſſabant tempore apiſci
Ex aliis alios avidi contagia morbi.

Et ℣. 1241.

Qui fuerant autem præſto, Contagibus ibant.

of

of his * *Problems*, How the *Plague infects* thoſe who approach to the Sick. And what is of more Conſequence, *Galen* himſelf is very clear in it †; for he has theſe words, ὅτι συνδιαλέγεσθαι τοῖς λοιμώττουσιν ἐπισφαλὲς, ἀπολαῦσαι γὰρ κίνδυνος, ὥσπερ ψώρας τινὸς, &c. *that it is unſafe to be about thoſe, who have the Plague, for fear of catching it, as in the Itch*, &c. Indeed this is a thing ſo evident, that we find it at preſent the current Opinion of all Mankind, a very few Perſons only excepted, who have diſtinguiſhed themſelves by their Singularity in maintaining the oppoſite Sentiment. And it is ſomething ſtrange that any one ſhould make a Queſtion of a thing ſo obvious, which is

* Sect. 1. Διὰ τί ποτε ὁ λοιμὸς μόνη τῶν νόσων μᾶλλον τὰς πλησιάζουσας τοῖς διεφθαρμένοις προσαναπίμπλησι;

† Περὶ διαφορᾶς πυρετῶν, βιβ. α.

proved

proved ſufficiently by one Property only of the Diſeaſe, that whenever it ſeizes one Perſon in a Houſe, it immediately after attacks the greateſt part of the Family. This Effect of the *Plague* has been ſo remarkable at all times, that whoever conſiders it well, cannot poſſibly, I think, have any Doubt remaining, or require any ſtronger Argument to convince him, that the Diſeaſe is infectious. For this very reaſon the *Small-Pox* and *Meaſles* are generally allowed to be *contagious*, becauſe it is obſerved, that when either of theſe Diſeaſes is got among a Family, it uſually ſeizes ſucceſſively the greateſt part of that Family, who have not had it before; at leaſt if ſuch in the Family hold free Communication with the Sick. And by the ſame Argument the *Plague* muſt be concluded to be infectious likewiſe. It cannot be pretended,

that

that this is occaſioned in the *Plague* from this only, that the ſound Perſons are render'd more than ordinarily obnoxious to the unhealthy Air, or whatever be the common Cauſe of the Diſeaſe, by being put into fear and diſpirited, upon ſeeing others in the ſame Houſe taken ſick: For if this were the Caſe, *Children*, who are too young to have any Apprehenſions upon this Account, would eſcape better than others, the contrary of which has been always experienced.

It is true, ſome have not been attacked by the Diſeaſe, though conſtantly attending about the Sick. But this is no Objection againſt what is here advanced; for it is as eaſily underſtood how ſome Perſons, by a particular Advantage of Conſtitution, ſhould reſiſt Infection, as how they ſhould conſtantly

breath

breath a noxious Air without hurt. An odd Obſervation of *Diemerbroek* deſerves notice in this Place; That, part of a Family removed into a Town free from the *Plague*, was obſerved by him to be taken ill of it ſoon after the part left behind in the diſeaſed Town fell ſick; which certainly could ſcarce have happened, unleſs a Communication between the Healthy and the Sick, by Letters or otherwiſe, was capable of cauſing it*. Of the ſame Nature is a Circumſtance recorded by *Euagrius* of the *Plague*, which he deſcribes, and what, he owns, ſurprized him very much; That, many of thoſe, who left infected Places, were ſeized with the *Plague* in the Towns to which they had retired, while the old Inhabitants of thoſe Towns were free from the

* De Peſt. c. 4. annot. 6.

Diſeaſe †.

Diſeaſe *. But to multiply Proofs of a thing ſo evident, is needleſs; innumerable are at hand, and ſeveral will occaſionally occur in the following Parts of this Diſcourſe, when we come to ſpeak in particular of the ways, by which this Infection is conveyed about. I ſhall therefore ſay no more in this Place, but only, that all the Appearances attending this Diſeaſe are very eaſily explained upon this Principle, and are hardly to be accounted for upon any other. We learn from hence the reaſon why when the *Plague* makes its firſt Appearance in any Place, though the Number of Sick is exceeding ſmall, yet the Diſeaſe uſually operates upon them in the moſt violent manner, and is attended with its very worſt Symptoms. Now was the Diſeaſe produced not by imported *Conta-*

* Euagrii Hiſtor. Eccleſ. l. 4. c. 29.

gion, but from ſome Cauſe, which had its Original in the diſeaſed Place, and conſequently from a Cauſe gradually bred, the contrary muſt happen; the Diſeaſed would at firſt not only be few in Number, but their Sickneſs likewiſe more moderate than afterwards, when the morbific Cauſes were raiſed to their greateſt Malignity. From the ſame Principle we ſee the reaſon, why People have often remained in Safety in a diſeaſed Town, only by ſhutting themſelves up from all Communication with ſuch, as might be ſuſpected of giving them the Diſeaſe. When the *Plague* was laſt in *England*, while it was in the Town of *Cambridge*, the Colleges remained entirely free by uſing this Precaution. In the *Plague* at *Rome* in the Years 1656 and 1657, the *Monaſteries* and *Nunneries*, for the

moſt

moſt part, defended themſelves by the ſame Means *: Whereas at *Naples*, where the *Plague* was a little before, theſe *religious Houſes*, from their Neglect herein, did not eſcape ſo well †. Nay the Infection entered none of the *Priſons* at *Rome* ‡, though the Naſtineſs of thoſe Places expoſes them very much. But, to avoid Prolixity, I ſhall give only one Inſtance more. I think it cannot be explained in any other reaſonable manner, how the laſt *Plague* in the City of *London*, which broke out in the Pariſh of St. *Giles's in the Fields* towards the latter end of the Year 1664, ſhould lie a-ſleep from *Chriſtmas* to the middle of *February*, and then break out again in the ſame Pariſh; and

* Gaſtaldi de avertendâ & profligandâ Peſte, p. 117.

† Ibid. p. 118.

‡ Ibid. p. 117.

after another long reſt till *April*, ſhew itſelf again in the ſame Place *.

To proceed, whoever examines the Hiſtories of *Plagues* in all times, which have been deſcribed, with any Exactneſs, will find very few, that do not agree in theſe eſſential Marks, whereby the *Plague* may be diſtinguiſhed from other *Fevers*. I confeſs an Inſtance or two may be found to the contrary; perhaps the Hiſtory of our own Country furniſhes the moſt remarkable of any †. But Examples of this kind are ſo very rare, that I think it muſt be concluded, that the *Plague* is uſually one and the ſame Diſtemper.

In the next place I ſhall endeavour to ſhew, that the *Plague* has

* Vid. Bills of Mortality for the Year 1665.
† The Sweating Sickneſs.

always

always the ſame Original, and is brought from *Africa*, the Country which has entail'd upon us two other infectious Diſtempers, the *Small-Pox* and *Meaſles*. In all Countries indeed *Epidemic Diſeaſes* extraordinarily mortal, are frequently bred in *Goals*, *Sieges*, *Camps*, &c. which Authors have often in a large Senſe called *Peſtilential*: But the true *Plague*, which is attended with the diſtinguiſhing Symptoms before deſcribed, and which ſpreads from Country to Country, I take to be an *African* Fever bred in *Æthiopia* or *Ægypt*, and the *Infection* of it carried by Trade into the other Parts of the World.

It is the Obſervation of *Pliny*, that the *Peſtilence* always travels from the *Southern* Parts of the World to the *Weſtern*, that is, in

his Phraſe, into *Europe* *. And the moſt accurate Accounts in all Times of this Diſeaſe, wherever it has raged, bring it from *Africa*. *Thucydides* †, in his admirable Deſcription of the famous *Plague* of *Athens*, ſays, that it began in Upper *Æthiopia*, then came into *Ægypt*, from whence it was ſpread firſt into *Perſia*, and afterwards into *Greece*.

THERE is in all ancient Hiſtory no Account of any *Plague* ſo dreadful as that, which broke out at *Conſtantinople* in the time of the Emperor *Juſtinian A. D.* 543. This is ſaid to have ſpread its Infection over all the Earth, and to have laſted fifty two Years. The Hiſto-

* Nat. Hiſt. l. 7. c. 50.
† Hiſtor. l. 2.

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ry of it is very well told by *Euagrius* *, and yet more learnedly by *Procopius* †; and they both obſerve, that the Diſtemper had its Birth in *Æthiopia* or *Ægypt*.

THIS is likewiſe agreeable to the modern Relations of Travellers and Merchants from *Turkey*, who generally inform us, that the frequent *Plagues*, which depopulate that Country, are brought thither from the Coaſt of *Africa*; inſomuch that at *Smyrna*, and other Ports of that Coaſt, they often know the very Ship which brings it. And, in theſe latter Ages, ſince our Trade with *Turkey* has been pretty conſtant, the *Plagues* in theſe Parts of *Europe* have evidently been brought from thence.

* Eccleſiaſt. Hiſtor. l. 4. c. 29.
† De Bello Perſico, l. 2. c. 22.

THE preſent *Plague* in *France* came indiſputably from *Turkey*, as I ſhall particularly ſhew in ſome of the following Pages. The *Plague*, which broke out at *Dantzick* twelve Years ago, and ſpread from thence to *Hamburgh*, *Copenhagen*, and other Cities in the *North*, made its way thither from *Conſtantinople* through *Poland*, &c. And the laſt *Plague* in this City, if we may believe Dr. *Hodges*, had the ſame Original, being brought to us from *Holland*, but carried to them by *Cotton* imported from *Turkey* *.

THE greateſt *Mortality* that has happen'd in later Ages, was about the middle of the fourteenth Century; when the *Plague* ſeized Country after Country for five Years together *.

* Vid. Hodges de Peſte.

gether *. In the Year 1346 it raged in *Ægypt*, *Turkey*, *Greece*, *Syria*, and the *East-Indies*; in 1347 ſome Ships from the *Levant* carried it to *Sicily*, *Piſa*, *Genoa*, &c. in 1348 it got into *Savoy*, *Provence*, *Dauphiny*, *Catalonia*, and *Caſtile*, &c. in 1349 it ſeized *England*, *Scotland*, *Ireland*, and *Flanders*; and the next Year *Germany*, *Hungary*, and *Denmark*; and in all Places, where it came, it made ſuch heavy Deſtruction, that it is ſaid to have diſpeopled the Earth of more than of half its Inhabitants †. Now ſince *Africa* had a ſhare of this *Plague* in the very beginning, I queſtion not but it had its firſt Riſe in that Country, and not in *China*, as *M. Villani*, in his Hiſtory of thoſe Times, relates from the

* Vid. Iſtorie di Matteo Villani, l. 1. c. 2.
† Mezeray Hiſt. de France, Tom. 1. p. 798.

Report

Report of *Genoeſe* Seamen, who came from thoſe Parts, and ſaid it was occaſion'd there by a great *Ball of Fire*, which either burſt out of the Earth, or fell down from Heaven *. But this Relation is ſo very incredible, that I cannot think we ought at all to rely upon it, ſeeing we have no other certain Inſtance of a *Plague*, which roſe firſt in that Country.

It is very remarkable, that the ſeveral Countries of *Europe* have always ſuffered more or leſs in this way, according as they have had a greater or leſſer Commerce with *Africa*; or with thoſe Parts of the *Eaſt*, that have traded thither. Which Obſervation, by the by, may help to ſolve a Difficulty concerning the great Encreaſe of Peo-

* Villani loco citato.

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ple among the *Northern* Nations in ancient Times, more than at preſent; for in thoſe Ages, having no Communication at all with *Africa*, they were not waſted with *Plagues*, as they have been ſince.

As the People of *Marſeilles*, from the firſt Foundation of their City by the *Phoceans*, were famous for Trade, and made long Voyages Southwards on the *African* Coaſt *; ſo we learn from an odd Cuſtom among them, recorded in Antiquity †, that they were of old liable to *Plagues*. Their manner at ſuch times was, that ſome one poor Man offered himſelf to be maintained at the publick Expence with delicate Food for a whole Year; at the end

* Vid. Huet. Hiſtoire de Commerce des Anciens, p. 88.

† Vid. Servii Comment. in Virg. Æneid. lib. 3. ℣. 57.

of

of which he was led about the City dreſſed in conſecrated Garments and Herbs; and being loaded with Curſes as he went along, that the Evils of the Citizens might fall upon him, he was at laſt thrown into the Sea.

AGREEABLE to this Remark upon Trade is the Obſervation of *Procopius* in his forecited Hiſtory, that the *Plague* was always found to ſpread from *Maritime* Places into the *Inland* Countries, which has ever ſince been confirmed by Experience.

HAVING ſhewn this Diſeaſe to be a Diſtemper of a diſtinct Species, and to take its Riſe only in *Africa*; we muſt next ſeek for its Cauſe in that Country and no where elſe. We ought therefore to conſider, what there is peculiar to that Country, which can reaſonably be ſup-

poſed

poſed capable of producing it. Wherefore I ſhall briefly ſet down, as much as ſerves for this purpoſe, of the State of *Grand Cairo* in *Ægypt*, and of *Æthiopia*, the two great Seminaries of the *Plague*; Travellers relating that theſe Countries are more infeſted with it than moſt other Parts of *Africa*.

GRAND CAIRO is crouded with vaſt Numbers of Inhabitants, who for the moſt part live very poorly, and naſtily; the Streets are very narrow, and cloſe; it is ſituate in a Sandy Plain at the Foot of a Mountain, which by keeping off the Winds, that would refreſh the Air, makes the *Heats* very ſtifling. Through the midſt of it paſſes a great *Canal*, which is filled with Water at the overflowing of the *Nile*; and after the River is decreaſed, is gradually dried up:

Into

Into this the People throw all manner of Filth, Carrion, &c. ſo that the Stench which ariſes from this, and the Mud together, is inſufferably offenſive *. In this Poſture of things, the *Plague* every Year conſtantly preys upon the Inhabitants, and is only ſtopt, when the *Nile*, by overflowing, waſhes away this Load of Filth; the *Cold Winds*, which ſet in at the ſame time, lending their Aſſiſtance, by purifying the Air.

In *Æthiopia* thoſe prodigious Swarms of *Locuſts*, which at ſome times cauſe a Famine, by devouring the Fruits of the Earth, unleſs they happen to be carried by the Winds clear off into the Sea, are obſerved to entail a new Miſchief upon the Country, when they die and rot,

* Vid. Le Brun Voyage au Levant, c. 38.

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by raiſing a *Peſtilence* *; the Putrefaction being heightened by the exceſſive *Intemperance of the Climate*, which is ſo very great in this Country, that it is infeſted with violent *Rains* at one Seaſon of the Year, for three or four Months together †. And it is particularly obſerved of this Country, that the *Plague* uſually invades it, whenever Rains fall during the ſultry Heats of *July* and *Auguſt* ‡.

Now if we compare this laſt Remark of the *Intemperance of the Climate* in *Æthiopia*, with what the *Arabian* Phyſicians **, who lived near theſe Countries, declare, that *Peſtilences* are brought by *unſeaſona-*

* Vid Ludolf. Hiſtor. Æthiop. lib. 1. c. 13. & D. Auguſt. de Civitat. Dei, lib. 3. c. ult.

† Vid. Ludolf. Hiſtor. Æthiop. lib. 1. c. 5. & Comment.

‡ J. Leo Hiſt. Afric. lib. 1.

** Rhaſ. & Avicen.

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ble Moiſtures, Heats, and want of Winds, I believe we ſhall be fully inſtructed in the uſual Cauſe of this Diſeaſe. Which from all theſe Obſervations compared together, I conclude to ariſe from the *Putrefaction* ſo conſtantly generated in theſe Countries, when *that* is heightened and encreaſed, by the ill State of Air now deſcribed; and eſpecially from the *Putrefaction* of animal Subſtances.

It is very plain, that animal Bodies are capable of being altered into a Matter fit to breed this Diſeaſe, becauſe this is the Caſe of every one who is ſick of it, the Humours in him being corrupted into a Subſtance which will *infect* others. And it is not improbable, that the volatile Parts with which Animals abound, may in ſome ill States of Air in the ſultry Heats of *Africa* be converted

converted by Putrefaction into a Subſtance of the ſame kind, ſince in theſe colder Regions, we ſometimes find them to contract a greater Degree of Acrimony than moſt other Subſtances will do by *putrefying*, and alſo more dangerous for Men to come within the reach of their Action; as in thoſe pernicious, and even poyſonous Juices, which are ſometimes generated in corrupted Cartaſſes. Of which I have formerly given one very remarkable Inſtance *, and, if it were neceſſary, many more might be produced, eſpecially in *hydropic Bodies*, and in *cancerous Tumors*. Nay more, we find *animal Putrefaction* ſometimes to produce in theſe *Northern* Climates very fatal Diſtempers, though they do not ariſe to the Malignity of the true *Plague*. For ſuch

* Eſſays on Poyſons, p. 178.

Fevers are often bred, where a large Number of People are closely confined together; as in *Goals*, *Sieges*, and *Camps*.

And perhaps it may not be here amiss to remark, that the *Ægyptians* of old were so sensible how much the *Putridness* of dead Animals contributed towards breeding the *Plague*, that they worshipped the Bird *Ibis* for the Service it did in devouring great Numbers of Serpents; which they observed did hurt by their Stench when dead, as well as by their Bite when alive *.

But no kind of *Putrefaction* is ever heightned in these *Europæan*

* Cicero de Nat. Deor. lib. 1. §. 36. speaking of these Birds, says, *Avertunt Pestem ab Ægypto, cum volucres Angues ex vastitate Libyæ Vento Africo invectas interficiunt atque consumunt; ex quo fit ut illæ nec Morsu vivæ noceant nec odore mortuæ.*

Countries

Countries to a degree capable of producing the true *Plague*; and we learn from the Obſervation of the *Arabian* Phyſicians, that ſome Indiſpoſition of the *Air* is neceſſary in the hotteſt Climates, either to cauſe ſo exalted a Corruption of the forementioned Subſtances, or at leaſt to enforce upon Mens Bodies the Action of the *Effluvia* exhaled from thoſe Subſtances, while they putrefy. Both which Effects may well be expected from the ſenſible ill Qualities of the *Air* before deſcribed, whenever they continue and exert their Force together any conſiderable time.

WHAT I have here advanced of the firſt Original of the *Plague*, appears to me ſo reaſonable, that I cannot enough wonder at Authors for quitting the Conſideration of ſuch manifeſt Cauſes for *Hidden*

Qualities; ſuch as *Malignant Influences of the Heavens*; *Arſenical*, *Bituminous*, or other *Mineral Effluvia*; with the like imaginary or uncertain Agents.

THIS however I do not ſay with deſign abſolutely to exclude all Diſorders in the *Air*, that are more latent than the intemperate *Heat* and *Moiſture* before mentioned, from a Share in increaſing and promoting the Infection of the *Plague*, where it is once bred: for I rather think this muſt ſometimes be the Caſe; like to what is obſerved among us in relation to another infectious Diſtemper, namely the *Small-Pox*, which is moſt commonly ſpread, and propagated by the ſame manifeſt Qualities of the *Air* as thoſe here deſcribed: Notwithſtanding which, this Diſtemper is ſometimes known to rage with

with great Violence in the very oppoſite Conſtitution of *Air*, *viz.* in the Winter during dry and froſty Weather. But to breed a Diſtemper, and to give force to it when bred, are two different things. And though we ſhould allow any ſuch ſecret Change in the *Air* to aſſiſt in the firſt Production of the Diſeaſe; yet it may juſtly be cenſured in theſe Writers, that they ſhould undertake to determine the *Specific Nature* of theſe ſecret Changes and Alterations, which we have no means at all of diſcovering: Since they do not ſhew themſelves in any ſuch ſenſible manner, as to come directly under our Examination; nor yet do their Effects, in producing the *Plague*, point out any thing of their *Specific Nature*.

All that we know, is this, that the Cauſe of the *Plague*, whatever

it be, is of ſuch a Nature, that when taken into the Body, it works ſuch Changes in the Blood and Juices, as to produce this Diſeaſe, by ſuddenly giving ſome Parts of the Humours ſuch corroſive Qualities, that they excite *Inflammations* or *Gangrenes*, wherever they fall. But we are acquainted too little with the Laws, by which the ſmall Parts of Matter act upon each other, to be able preciſely to determine the Qualities requiſite to change animal Juices into ſuch acrimonious Humours, or to explain how all the diſtinguiſhing Symptoms attending this Diſeaſe are produced. The *great Philoſopher*, whoſe Diſcoveries in Nature have ſurprizingly exceeded the utmoſt Expectations of the moſt penetrating Minds, has carried his Searches no farther than to find out, that theſe Operations moſt probably depend upon a

ſubtile

ſubtile and *elaſtic Spirit* diffuſed throughout the Univerſe *; but he has yet taught us little of the particular manner, in which this *Spirit* acts. And till this is done, our Knowledge of theſe Operations of Nature muſt neceſſarily be very narrow; eſpecially of what paſſes within animal Bodies, the moſt delicate and complicated of all the known Works of Nature. But, in the mean time, it is ſufficient, that the Cauſes, to which I have aſcribed the firſt Riſe of the *Plague*, are ſupported by Obſervation, and have been ſhewn not to be improbable.

* Newton's Optics, Qu. 18, 19, 20, 21, 22, 23, 24.

CHAP. II.

Of the Cauſes which ſpread the Plague.

I HAVE been thus particular in tracing the *Plague* up to its firſt Origine, in order to remove, as much as poſſible, all Objection againſt what I ſhall ſay of the Cauſes which excite, and propagate it among us. This is done by *Contagion*. Thoſe who are Strangers to the full Power of *this*, that is, thoſe who do not underſtand how ſubtile it is, and how widely the Diſtemper may be ſpread by *Infection*, aſcribe the Riſe of it wholly to the malignant Quality of the *Air* in all Places, wherever it happens; and,

on the other hand, ſome have thought that the Conſideration of the infectious Nature of the Diſeaſe muſt exclude all regard to the Influence of the *Air*: Whereas the *Contagion* accompanying the Diſeaſe, and the Diſpoſition of the *Air* to promote that *Contagion*, ought equally to be conſidered; both being neceſſary to give the Diſtemper full force. The Deſign therefore of this Chapter, is to make a proper Balance between theſe two, and to ſet juſt Limits to the Effects of each.

For this purpoſe, I ſhall reduce the Cauſes, which ſpread the *Plague*, to three, *Diſeaſed Perſons*, *Goods tranſported from infected Places*, and *a corrupted State of Air*.

There are ſeveral Diſeaſes, which will be communicated from the

the Sick to others, and this not done after the ſame manner in all. The *Hydrophobia* is communicated no other way than by mixing the morbid Juices of the diſeaſed Animal immediately with the Blood of the found, by a *Bite*, or what is analogous thereto; the *Itch* is given by *ſimple Contact*; the *Lues Venerea* not without *a cloſer Contact*; but the *Meaſles*, *Small-Pox*, and *Plague* are caught by a *near Approach* only to the Sick; for in theſe three laſt Diſeaſes Perſons are render'd obnoxious to them only by reſiding in the ſame Houſe, and converſing with the Sick.

In all infectious Diſeaſes of this laſt kind, eſpecially *Peſtilential* ones, through the whole Courſe of the Diſtemper, but chiefly at the latter end of it, the Blood is continually throwing off a great Quantity

tity of active Particles upon the ſeveral *Glands* of the Body, particularly upon thoſe of the *Mouth* and *Skin*, from which the Secretions are naturally the moſt copious and large; And theſe Particles being taken into the Body of a ſound Perſon, are apt to communicate to him the ſame Diſeaſe. This I ſuppoſe to be effected theſe two Ways. That ſometimes theſe *contagious* Particles, being drawn in with the *Air* in breathing, taint in their Paſſage the *ſalival Juices*, which being ſwallowed down into the *Stomach*, preſently fix their Malignity in that Part; and at other Times that the Blood is more immediately affected by the ſame hurtful Particles being mixed through Inſpiration with it in the *Lungs*. I think it certain that Reſpiration does always communicate to the

Blood

Blood ſome Parts from the Air: Which is proved from this Obſervation, that the ſame Quantity of Air will not ſuffice long for breathing, though it be deprived of none of thoſe Qualities, by which it is fitted to inflate the Lungs and agitate the Blood, the Uſes commonly aſcribed to it. And this is farther confirm'd by what the learned Dr. *Halley* has inform'd me, that when he was ſeveral Fathom under Water in his *Diving Engine*, and breathing an Air much more condenſed than the natural, he obſerved himſelf to breath more ſlowly than uſual: Which makes it even probable, that this conveying to the Blood ſome ſubtile Parts from the Air, is the chief Uſe of *Reſpiration*; ſince when a greater Quantity of *Air* than uſual was taken in at a time, and conſequently more of

theſe

theſe ſubtile Parts received at once by the Blood, a leſs frequent Reſpiration ſufficed.

THIS is one means by which the *Plague*, when once bred, is ſpread and increaſed; but the ſecond of the fore-mentioned Cauſes, namely, *Goods from infected Places*, extends the Miſchief much wider. By the preceding Cauſe, the *Plague* may be ſpread from *Perſon* to *Perſon*, from *Houſe* to *Houſe*, or perhaps from *Town* to *Town*; but this carries it into the remoteſt Regions. From hence the trading Parts of *Europe* have their principal Apprehenſions, and univerſally have recourſe to *Quarantaines* for their Security. The Univerſality of which Practice is a ſtrong Argument, that *Merchandize* will communicate *Infection*; for one cannot imagine, that ſo many Countries ſhould agree

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in ſuch a Cuſtom without the moſt weighty Reaſons. But beſides, there is not wanting expreſs Proof of this, from particular Examples, where this Injury has been done by ſeveral ſorts of Goods carried from infected Places to others. Some of theſe I ſhall hereafter be obliged to mention; at preſent I ſhall confine my ſelf to two Inſtances only. The firſt ſhall be of the Entrance of the *Plague* into *Rome* in the Year 1656, which we are aſſured was conveyed thither from *Naples* by Clothes and other Wares from that Place, brought firſt to Port *Neptuno*, and carried from thence to the Neighbouring Caſtle of St. *Lawrence*; which after having been kept ſome time there, were conveyed into *Rome* *. The ſecond Inſtance I ſhall take is from the Account given us of the

* Gaſtaldi de Peſt. p. 116.

Entrance

Entrance of the Plague into *Marſeilles* *; which being drawn up with great Exactneſs, may be the more rely'd on. It appears indiſputably by this Account, that the Miſchief was brought thither by Goods from the *Levant*; for the firſt, who had the Diſtemper, was one of the *Crew* of the *Ship*, which brought thoſe *Goods*; the next were thoſe, who attended upon the ſame *Goods*, while they were under *Quarantaine*; and ſoon after the *Surgeon*, whom the Magiſtrates of *Marſeilles* appointed to examine the Bodies of thoſe, who died.

THIS Relation, if duly conſider'd, is, I believe, ſufficient to remove all the Doubts any one can have about the Power of *Merchan-*

* Journal de ce qui s'eſt paſſé a Marſeille, &c.

dize

dize to convey *Infection*; for it affords all the Evidence, the moſt ſcrupulous can reaſonably deſire. Poſſibly there might be ſome Fever of extraordinary Malignity in *Marſeilles*, ſuch as is commonly called *Peſtidential*, before the Arrival of theſe Goods: But no ſuch Fever has any indiſputable Right to the Title of *Peſtilence*, as I have before ſhewn. On the contrary, theſe two, the real *Peſtilente*, and ſuch *Peſtilential Fevers*, muſt carefully be diſtinguiſhed, if we deſign to avoid all Miſtakes in reaſoning upon theſe Subjects.

Some ſuch Fever of uncommon Malignity, I ſay, might perhaps be in *Marſeilles* before the Arrival of theſe Goods; there might likewiſe perhaps be an Inſtance or two of *Fevers* attended with *Eruptions*, bearing ſome Reſemblance to thoſe of

of the *Plague*; for ſuch I my ſelf have ſometimes ſeen here in *London*; but it is not conceivable, that there ſhould be any Appearance of the true *Plague* before that time: For it was full ſix Weeks from the time of the Sailor's Death, which had given the Alarm, and raiſed a general Attention, before the Magiſtrates received Information of any one's dying of the *Plague* in the City. And I believe it was never known, that the *Plague*, being once broke out, gave ſo long a Truce in hot Weather.

I think it not improper, for the fuller Confirmation of the preſent Point, to give a Relation communicated to me by a Perſon of unqueſtionable Credit, of the like Effect from Goods, in reſpect to the *Small-Pox*; which Diſtemper is frequently carried in the Nature of the

Plague both to the *East* and *West-Indies* from these Countries, and was once carried from the *East-Indies* to the *Cape of Good Hope*, in the following manner. About four Years ago, a Ship from the *East-Indies* arrived at that Place: In the Voyage three Children had been sick of the *Small-Pox*: The foul Linen used about them was put into a Trunk, and lock'd up. At the Ship's Landing, this was taken out, and given to some of the Natives to be washed: Upon handling the Linen, they were immediately seized with the *Small-Pox*, which spread into the Country for many Miles, and made such a Desolation, that it was almost dispeopled.

It has been thought so difficult to explain the manner how *Goods* retain the Seeds of *Contagion*, that some* Au-

* Kircher, Langius, &c.

thors have imagined *Infection* to be performed by the Means of *Inſects*, the *Eggs* of which may be conveyed from Place to Place, and make the Diſeaſe when they come to be *hatched*. But as this is a Suppoſition grounded upon no manner of Obſervation, ſo I think there is no need to have recourſe to it. If, as we have conjectured, the *Matter* of *Contagion* be an active Subſtance generated chiefly from animal Corruption, it is not hard to conceive how this may be lodged and preſerved in ſoft porous Bodies, which are kept preſſed cloſe together.

We all know how long a time *Perfumes* hold their Scent, if wrapt up in proper Coverings: And it is very remarkable, that the ſtrongeſt of theſe, like the Matter we are treating of, are moſtly *animal*

Juices, as *Moſch*, *Civet*, &c. and that the Subſtances, found moſt fit to keep them in, are the very ſame with thoſe, which are moſt apt to receive and communicate Infection, as *Furrs*, *Feathers*, *Silk*, *Hair*, *Wool*, *Cotton*, *Flax*, &c. the greateſt part of which are likewiſe of the *animal* kind.

THE third Cauſe we aſſigned for the ſpreading of *Contagion*, was a corrupted State of *Air*. Although the *Air* be in a right State, yet a ſick Perſon may infect thoſe who are very near him; as we find the *Peſtilence* to continue ſometimes among the *Crew* of a Ship, after they have ſailed out of the infectious Air wherein the Diſeaſe was firſt caught. A remarkable Accident of this Nature is recorded to have happened in the *Plague* at *Genoa* in the Year 1656. Eleven Perſons put to

Sea in a *Felucca*, with deſign to withdraw themſelves from the *Contagion*, and retire into *Provence*; but one of them falling ſick of the *Plague* ſoon after they had imbarked, infected the reſt, inſomuch that others being taken ill, and dying in their turns, they were not admitted any where, but were forced to return from whence they came; and by that time the Boat arrived again at *Genoa* no more than one of them ſurvived *.

HOWEVER in this Caſe the Malady does not uſually ſpread far, the *contagious* Particles being ſoon diſperſed and loſt. But when in a corrupt Diſpoſition of the *Air* the *contagious* Particles meet with the ſubtile Parts generated by that Corruption, by uniting with them they

* Toulon. Traité de la Peſte.

become much more active and powerful, and likewiſe of a more durable Nature, ſo as to form an infectious Matter capable of conveying the Miſchief to a greater diſtance from the diſeaſed Body, out of which it was produced.

In general, a *hot Air* is more diſpoſed to ſpread *Contagion* than a cold one, as no one can doubt, who conſiders how much all kinds of *Effluvia* are farther diffuſed in a *warm Air*, than in the contrary. But moreover, that State of *Air*, when unſeaſonable Moiſture and want of Winds are added to its Heat, which gives birth to the *Plague* in ſome Countries, will doubtleſs promote it in all. For *Hippocrates* ſets down the ſame Deſcription of a *Peſtilential State* of Air in his Country, as the *Arabians* do of the Conſtitution, which gives Riſe to the *Plague*

in

in *Africa* *: *Mercurialis* aſſures us the ſame Conſtitution of *Air* attended the *Peſtilence* in his time at *Padua* †; and *Gaſſendus* obſerved the ſame in the *Plague* of *Digne* ‡. Beſides, it is eaſy to ſhew how the *Air*, by the ſenſible ill Qualities diſcourſed of in the laſt Chapter, ſhould favour infectious Diſeaſes, by rendring the Body obnoxious to them.

INDEED other hurtful Qualities of the *Air* are more to be regarded than its Heat alone; for the *Plague* is ſometimes ſtopt, while the Heat of the Seaſon increaſes, upon the

* *Hippocr.* Epid. l. 3. That *Hippocrates* deſcribes here the Conſtitution of Air accompanying the true *Plague*, contrary to what ſome have thought, *Galen* teſtifies in his Comment upon this Place, in Libr. de Temper. l. 1. c. 4. and in Libr. de differentiis Febr. l. 1. c. 4.

† Vid. *Mercurial.* Prælect. de Peſtilent.

‡ Notitia Eccleſ. Dinienſis.

Emendation of the *Air* in other reſpects. At *Smyrna* the *Plague*, which is yearly carried thither by Ships, conſtantly ceaſes about the 24th of *June*, by the dry and clear Weather they always have at that time; the unwholſome Damps being then diſſipated that annoy the Country in the *Spring*. However, the Heat of the Air is of ſo much Conſequence, that if any Ship brings it in the Winter Months of *November*, *December*, *January*, or *February*, it never ſpreads; but if later in the Year, as in *April* or afterwards, it continues till the time before mentioned.

But moreover, what was ſaid before of ſome latent Diſorders in the *Air* having a ſhare in ſpreading the *Plague*, will likewiſe have place in theſe Countries; as the laſt *Plague* in the City of *London*

don remarkably proves, the Seeds of which, upon its firſt Entrance, and while it was confined to a Houſe or two, preſerved themſelves through a hard froſty *Winter*, and again put forth their malignant Quality as ſoon as the Warmth of the *Spring* gave them force; but the next Winter they were ſuppreſſed ſo as to appear no more, though in the Month of *December* more than half the *Pariſhes* of the City were infected.

A *corrupted State* of Air is, without doubt, neceſſary to give theſe contagious Atoms their full force; for otherwiſe it were not eaſy to conceive how the *Plague*, when once it had ſeized any Place, ſhould ever ceaſe but with the Deſtruction of all the Inhabitants: Which is readily accounted for by ſuppoſing an Emendation of the Qualities of

the

the *Air*, and the reſtoring of it to a healthful State capable of diſſipating and ſuppreſſing the Malignity.

On the other hand, it does not appear, that the *Air*, however corrupted, is uſually capable of carrying Infection to a very great diſtance; but that commonly the *Plague* is ſpread from Town to Town by infected Perſons and Goods; for there are numberleſs Inſtances, where the *Plague* has cauſed a great Mortality in Towns, while other Towns and Villages, very near them, have been entirely free. And hence it is, that the *Plague* ſometimes ſpreads from Place to Place very irregularly. *Thuanus** ſpeaks of a *Plague* in *Italy*, which one Year was at *Trent* and *Verona*,

the

the next got into *Venice* and *Padua*, leaving *Vicenza*, an intermediate Place, untouched, though the next Year that alſo felt the ſame Stroke; a certain Proof that the *Plague* was not carried by the *Air* from *Verona* to *Padua* and *Venice*; for the infected *Air* muſt have tainted all in its Paſſage. We have had lately in *France* one Inſtance of the ſame Nature when the *Plague* was carried at once out of *Provence* ſeveral Leagues into the *Gevaudan*. Uſually indeed the *Plague*, eſpecially when more violent than ordinary, ſpreads from infected Places into thoſe which border upon them; which probably is ſometimes effected by ſome little Communication infected Towns are obliged to hold with the Country about them for the ſake of Neceſſaries, the Subtlety of the Venom now and then eluding the greateſt Precautions;

and

and at other times by ſuch as withdraw themſelves from infected Places into the Neighbourhood.

I own it cannot be demonſtrated, that when the *Plague* makes great Ravage in any Town, the Number of Sick ſhall never be great enough to load the *Air* with infectious *Effluvia*, emitted from them in ſuch Plenty, that they may be conveyed by the Winds into a neighbouring Town or Village without being diſperſed ſo much as to hinder their producing any ill Effects; eſpecially ſince it is not unuſual for the *Air* to be ſo far charged with theſe noxious *Atoms*, as to leave no Place within the infected Town ſecure; inſomuch that when the Diſtemper is at its height, all ſhall be indifferently infected, as well thoſe who keep from the Sick, as thoſe who are near them; though at the beginning

ning of a *Plague* to avoid all Communication with the Diſeaſed, is an effectual Defence. However, I do not think this is often the Caſe, juſt as the *Smoak*, with which the *Air* of the City of *London* is conſtantly impregnated, eſpecially in *Winter*, is not carried many Miles diſtant, though the Quantity of it is vaſtly greater than the Quantity of infectious *Effluvia*, that the moſt mortal *Plague* could generate.

But, to conclude what relates to the *Air*, ſince the ill Qualities of it in theſe *Northern* Countries are not alone ſufficient to excite the *Plague*, without imported *Contagion*, this ſhews the Error of a common Opinion, countenanc'd by Authors of great Name *, that we are neceſſarily *viſited* with the *Plague* once

* Sydenham de Peſte.

in

in thirty or forty Years; which is a mere Fancy, without Foundation either in Reason or Experience; and therefore People ought to be delivered from such vain Fears. Since the *Pestilence* is never originally bred with us, but always brought accidentally from abroad, its coming can have no relation to any certain Period of Time. And although our three or four last *Plagues* have fallen out within a Century, yet that is much too short a Compass of Years to be a Foundation for a general Rule. Accordingly we see the last fifty six Years have passed over without any Calamity of this kind.

THE *Air* of our Climate is so far from being ever the Original of the true *Plague*, that most probably it never produces originally those milder infectious Distempers, the *Small-Pox* and *Measles*. For as these

theſe Diſeaſes were not heard of in *Europe* before the *Moors* had entered *Spain*; ſo no doubt, being brought by them, they have maintained themſelves ever ſince by *Contagion*, the *infectious* Seeds of theſe Diſeaſes exerting their Malignity in different degrees, according as the *Air* is more or leſs diſpoſed to aſſiſt them; but the *Air* is never found ſo contrary to them, as to ſuppreſs totally their Action long enough for their being quite deſtroyed.

MOREOVER, we are ſo far from any Neceſſity of theſe periodical Returns of the *Plague*, that, on the contrary, though we have had ſeveral Smokes of this kind, yet there are Inſtances of bad *Contagions* from abroad being brought over to us, which have proved leſs malignant here, when our *Northern Air* has not been diſpoſed to receive ſuch Impreſſions.

THE

THE *Sweating Sickness*, before hinted at, called *Sudor Anglicus* and *Febris Ephemera Britannica*, because it was commonly thought to have taken its Rise here, was most probably of a foreign Original; and though not the common *Plague* with *Glandular Tumors*, and *Carbuncles*, yet a real *Pestilence* from the same Cause, only altered in its Appearance, and abated in its Violence, by the salutary Influence of our Climate: For it preserved an Agreement with the common *Plague* in many of its *Symptoms*, as *excessive Faintness* and *Inquietudes*, *inward Burnings*, &c. these *Symptoms* being no where observed in so intense a Degree as here they are described to have been, except in the true *Plague*. And what is much more, it was likewise a *contagious* Disease.

THE

The firſt time this was felt here, which was in the Year 1485, it began in the Army, with which King *Henry* VII. came from *France* and landed in *Wales* *; and it has been ſuppoſed by ſome to have been brought from the famous Siege of *Rhodes* by the *Turks* three or four Years before, as may be collected from what Dr. *Keyes* ſays in one Place of his Treatiſe on this Diſeaſe †: Beſides, of the ſeveral returns, which this has made ſince that time, *viz.* in the Years 1506, 1517, 1528, and 1551. that in the Year 1528. may very juſtly be ſuſpected to have been owing to the common *Peſtilence*, which at thoſe times raged in *Italy* ‡, as I find one of our Hi-

* Vid. Caium de Febr. Ephemer. Brittan. and Lord *Bacon's* Hiſtory of *Henry* VII.

† Pag. 162. Edit. Lovan.

‡ Vid. Rondinelli Contagio in Fizenze, & Summonte Hiſtor. di Napoli.

ſtorians has long ago conjectured *. And the others were very probably from a *Turkiſh* Infection. If at leaſt ſome of theſe Returns were not owing to the Remains of former Attacks, a ſuitable Conſtitution of Air returning to put the latent Seeds in Action before they were quite deſtroyed. It is the more probable that this Diſeaſe was owing to *imported Contagion*, becauſe we are aſſured, that this Form of the Sickneſs was not peculiar to our Iſland, but that it made great Deſtruction with the ſame Symptoms in *Germany*, and other Countries †.

I call this Diſtemper a *Plague* with leſſened Force, becauſe though its carrying off thouſands for want

* Lord *Herbert*'s Hiſtory of *Henry* VIII.
† Thuani Hiſtor. lib. 5.

of

of right Management was a Proof of its Malignity, which indeed in one reſpect exceeded that of the common *Plague* itſelf; for few, who were deſtroyed with it, ſurvived the Seizure above one natural Day; yet its going off ſafely with *profuſe Sweats* in twenty four Hours, when due care was taken to promote that Evacuation, ſhewed it to be what a learned and wiſe Hiſtorian calls it, *rather a Surprize to Nature, than obſtinate to Remedies*; who aſſigns this Reaſon for expreſſing himſelf thus, that *if the Patient was kept warm with temperate Cordials, he commonly recovered* *. And, what I think yet more remarkable, *Sweating* which was the natural *Criſis* of this Diſtemper, has been found by a great Phyſician the beſt Remedy againſt the common *Plague*. By

* Lord *Verulam's* Hiſtory of *Henry* VII.

which means, when timely uſed, that Diſtemper may ſometimes be carried off without any external *Tumors*. Nay beſides, this judicious Obſerver informs us, that in many of his Patients, when he had broken the Violence of the Diſtemper by ſuch an artificial *Sweat*, a natural *Sweat* not excited by Medicines would break forth exceedingly refreſhing *.

And I cannot but take notice, as a Confirmation of what I have been advancing, that we had here the ſame kind of Fever in the Year 1713, about the Month of *September*, which was called the *Dunkirk Fever*, as being brought by our Soldiers from that Place. This probably had its Original from the *Plague*, which a few Years before

* Vide Sydenham de Peſte, An. 1665.

broke

broke out at *Dantzick*, and continued ſome time among the Cities of the *North*. With us this Fever began only with a Pain in the Head, and went off in large *Sweats* uſually after a Day's Confinement; but at *Dunkirk* it was attended with the additional Symptoms of *Vomiting*, *Diarrhœa*, &c.

To return from this Digreſſion, from all that has been ſaid, it appears, I think, very plainly, that the *Plague* is a real Poiſon, which being bred in the Southern Parts of the World, maintains itſelf there by circulating from *infected* Perſons to Goods; which is chiefly owing to the Negligence of the People in thoſe Countries, who are ſtupidly careleſs in this Affair: That when the Conſtitution of the *Air* happens to favour *Infection*, it rages there with great Violence; that at that

time more eſpecially diſeaſed Perſons give it to one another, and *contagious Matter* is lodged in Goods of a looſe and ſoft Texture, which being pack'd up, and carried into other Countries, let out, when opened, the impriſoned Seeds of *Contagion*, and produce the Diſeaſe whenever the *Air* is diſpoſed to give them force; otherwiſe they may be diſſipated without any conſiderable ill Effects: And laſtly, that the *Air* does not uſually diffuſe and ſpread theſe to any great Diſtance, if Intercourſe and Commerce with the Place infected be ſtrictly prevented.

PART

PART II.
Of the Methods to be taken againſt the PLAGUE.

CHAP. I.
Of preventing Infection from other Countries.

AS it is a Satisfaction to know, that the *Plague* is not a Native of our Country, ſo this is likewiſe an Encouragement to the utmoſt Diligence in finding out

Means to keep our ſelves clear from it.

THIS Caution conſiſts of two Parts: *The preventing its being brought into our Iſland*; and, if ſuch a Calamity ſhould happen, *the putting a Stop to its ſpreading among us.*

THE firſt of theſe is provided for by the eſtabliſhed Method of obliging Ships, that come from *infected* Places, to *perform Quarantaine*: As to which, I think it neceſſary, that the following Rules be obſerved.

NEAR to our ſeveral Ports, there ſhould be *Lazarettos* built in convenient Places, on little Iſlands if it can ſo be, for the Reception both of Men and Goods, which arrive from Places ſuſpected of *Infection*:

The

The keeping Men in *Quarantaine* on board the Ship being not ſufficient; the only Uſe of which is to obſerve whether any die among them. For *Infection* may be preſerved ſo long in Clothes, in which it is once lodged, that as much, nay more of it, if Sickneſs continues in the Ship, may be brought on Shore at the end than at the beginning of the forty Days: Unleſs a new *Quarantaine* be begun every time any Perſon dies; which might not end, but with the Deſtruction of the whole Ship's Crew.

If there has been any *contagious* Diſtemper in the Ship; the *ſound* Men ſhould leave their Clothes, which ſhould be burnt; the Men waſhed and ſhaved, and having freſh Clothes, ſhould ſtay in the *Lazaretto* thirty or forty Days. The reaſon

reaſon of this is; becauſe Perſons may be recovered from a Diſeaſe themſelves, and yet retain *Matter* of *Infection* about them a conſiderable time; as we frequently ſee the *Small-Pox* taken from thoſe, who have ſeveral Days before paſſed through the Diſtemper.

The *Sick*, if there be any, ſhould be kept in Houſes remote from the *Sound*, and ſome time after they are well, ſhould alſo be waſhed and ſhaved, and have freſh Clothes; whatever they wore while ſick being burnt: And then being removed to the Houſes of the *Sound*, ſhould continue there thirty or forty Days.

I am particularly careful to deſtroy the *Clothes* of the Sick, becauſe they harbour the very *Quinteſſence* of

of *Contagion*. A very ingenious Author *, in his admirable Deſcription of the *Plague* at *Florence* in the Year 1348, relates what himſelf ſaw; That two *Hogs* finding in the Streets the *Rags*, which had been thrown out from off a poor Man dead of the Diſeaſe, after ſnuffling upon them, and tearing them with their Teeth, they fell into Convulſions, and dy'd in leſs than an Hour. The learned *Fracaſtorius* acquaints us, that in his time, there being a *Plague* in *Verona*, no leſs than twenty five Perſons were ſucceſſively kill'd by the Infection of one *Furr* Garment †. And *Foreſtus* gives a like Inſtance of ſeven Children who dy'd by playing upon Clothes brought to *Alckmaer* in *North-Holland*, from an infected

* Boccaccio Decameron. Giornat. prim.
† De Contagion. l. 3. c. 7.

Houſe in *Zealand* *. The late Mr. *Williams*, Chaplain to Sir *Robert Sutton*, when Embaſſador at *Conſtantinople*, uſed to relate a Story of the ſame Nature told him by a *Baſſa*; that in an Expedition this *Baſſa* made to the Frontiers of *Poland*, one of the *Janizaries* under his Command dy'd of the *Plague*, whoſe Jacket, a very rich one, being bought by another *Janizary*, it was no ſooner put on, but he alſo was taken ſick and dy'd; and the ſame Misfortune befel five *Janizaries* more, who afterwards wore it. This the *Baſſa* related to Mr. *Williams*, chiefly for the ſake of this farther Circumſtance, that the Incidents now mentioned prevailed upon him to order the burning of the Garment; deſigning by this Inſtance to let Mr. *Williams* ſee there

* Obſervat. l. 6. Schol. ad Obſerv. 22.

were

were *Turks*, who allowed themſelves in ſo much Freedom of Thought, as not to pay that ſtrict Regard to the *Mahometan* Doctrine of Fatality, as the Vulgar among them do.

If there has been no Sickneſs in the Ship, I ſee no reaſon why the Men ſhould perform *Quarantaine*. Inſtead of this, they may be waſhed, and their Clothes aired in the *Lazaretto*, as Goods, for one Week.

But the greateſt Danger is from ſuch *Goods*, as are apt to retain Infection, ſuch as *Cotton*, *Hemp* and *Flax*, *Paper* or *Books*, *Silk* of all ſorts, *Linen*, *Wool*, *Feathers*, *Hair*, and all kinds of *Skins*. The *Lazaretto* for theſe ſhould be at a Diſtance from that for the Men, and they muſt in convenient Warehouſes be unpack'd, and expoſed,

as

as much as may be, to the freſh Air for forty Days.

THIS may perhaps ſeem too long; but as we don't know how much time preciſely is neceſſary to purge the Interſtices of ſpongy Subſtances from *infectious Matter* by freſh Air, the Caution cannot be too great in this Point. Certainly the time here propoſed, having been long eſtabliſhed by general Cuſtom, ought not in the leaſt to be retrenched; unleſs there could be a way found out of trying when Bodies have ceaſed to emit the noxious Fumes. Poſſibly this might be diſcovered by putting tender *Animals* near to them, particularly little *Birds*; becauſe it has been obſerved in Times of the *Plague*, that the Country has been forſaken by the *Birds*; and thoſe kept in Houſes

have

have many of them died *. Now if it ſhould be found, that *Birds* let looſe among Goods at the beginning of their *Quarantaine*, are obnoxious to the *Contagion* in them, it may be known, in good meaſure, when ſuch Goods are become clean, by repeating the Trial till *Birds* let fly among them receive no hurt. But the Uſe of this Fancy Experience only muſt ſhew; for I am well aware, that all *Plagues* do not indifferently affect all kinds of living Creatures; on the contrary, moſt are confined to a particular *Species* of them; like the Diſeaſe of the *Black Cattle* a few Years ſince, which neither proved infectious to other Brutes, nor to Men.

HOWEVER, the Uſe of *Quarantaines* is not wholly fruſtrated by

* Diemerbroeck, de Peſte, l. 1. c. 4.

our

our Ignorance of the exact time required for this Purification, ſince the *Quarantaine* does at leaſt ſerve as a Trial whether Goods are infected or not, it being hardly poſſible that every one of thoſe, who are obliged to attend upon them, can eſcape hurt, if they are ſo. And whenever that happens, the Goods muſt be deſtroyed.

I TAKE it for granted, that the *Goods* ſhould be *opened*, when they are put into the *Lazaretto*, otherwiſe their being there will avail nothing. This is the conſtant Practice in the *Ports* of *Italy*. That it is ſo at *Leghorn*, appears by the Account lately publiſhed of the Manner, in which *Quarantaines* are there performed; and I find, that the ſame Rule is obſerved at *Venice*, from an authentic Paper, I have before me, containing the

Methods

Methods made uſe of in that City, where *Quarantaines* have been enjoined ever ſince the Year 1484; at which time, as far as I can learn, they were firſt inſtituted in *Europe*. In that Place all *Bales* of *Cotton*, of *Camel's* or of *Beaver's Hair*, and the like, are *ript* open from end to end, and *Holes* made in them by the *Porters* every Day, into which they thruſt their naked Arms, in order that the Air may have free Acceſs to every part of the Goods. That ſome ſuch Cautions as theſe ought not to be omitted, is clearly proved by the Misfortune, which happened in the Iſland of *Bermudas* about twenty five Years ſince, where, as the Account has been given me by the learned Dr. *Halley*, a Sack of *Cotton* put on Shore by Stealth, lay above a Month without any Prejudice to the People of the Houſe, where it was hid; but

when it came to be distributed among the Inhabitants, it carried such a *Contagion* along with it, that the Living scarce sufficed to bury the Dead. This Relation Dr. *Halley* received from Captain *Tucker* of *Bermudas*, Brother to Mr. *Tucker* late Under-Secretary in our Secretary's Office.

INDEED, as it has been frequently experienced, that of all the Goods, which harbour *Infection*, *Cotton* in particular is the most dangerous, and *Turkey* is almost a perpetual *Seminary* of the *Plague*; I cannot but think it highly reasonable, that whatever *Cotton* is imported from that part of the World, should at all times be kept in *Quarantaine*; because it may have imbibed *Infection* at the time of its packing up, notwithstanding no Mischief has been felt from it by the Ship's Company.

pany. And the length of Time from its being pack'd up to its Arrival here, is no certain Security that it is cleared from the *Infection*. At leaſt, it is found, that the time employed by Ships in paſſing between *Turkey* and *Marſeilles*, is not long enough for Goods to looſe their *Infection*; as appears not only from the late Inſtance, but alſo from an Obſervation made in a certain *Memorial*, which I have ſeen, drawn up by the Deputy of Trade at *Marſeilles*. *Marſeilles* is the only Port in *France* allowed to receive Goods from the *Levant*, on account of its ſingular Convenience for *Quarantaines*, by reaſon of ſeveral ſmall *Iſlands* ſituate about it. The *Ports* of *France* in the *Weſtern Ocean* having had a deſire to be allowed the ſame Liberty, their Deputies preſented, in the Year 1701, a *Memorial* to the *Royal Council of Trade*, con-

taining ſeveral Reaſons for their Pretenſions. To this the *Deputy* at *Marſeilles* makes reply in the *Memorial* I am ſpeaking of, in which this Advantage of *Marſeilles* for *Quarantaines* above the other Ports, is much inſiſted upon; and, to evince the Importance thereof, it is declared in expreſs Words, that many times Perſons have been found in that Place to die of the *Plague* in their Attendance upon Goods under *Quarantaine*. Now if it be certain, that Goods have retained Infection during their Paſſage from *Turkey* to *Marſeilles*, it is too hardy a Preſumption to be admitted in an Affair ſo important as this, that they muſt neceſſarily loſe all Contagion in the time of their coming to us, becauſe the Voyage is ſomething longer. But beſides this, there are ſome few Inſtances of Goods, that have retained their Infection many

Years. In particular, *Alex. Benedictus* gives a very diſtinct Relation of a Feather Bed, that was laid by ſeven Years on Suſpicion of its being infected, which produced miſchievous Effects at the end of that great length of Time *. And Sir *Theodore Mayerne* relates, that ſome Clothes fouled with Blood and Matter from *Plague* Sores being lodged between *Matting* and the Wall of a Houſe in *Paris*, gave the *Plague* ſeveral Years after to a Workman, who took them out, which preſently ſpread through the City †.

WHAT makes *Cotton* ſo eminently dangerous, is its great Aptitude to imbibe and retain any ſort of *Effluvia* near it; of which I

* Alex. Benedict. de Peſt. cap. 3.

† In a Paper of Advice againſt the *Plague*, laid before the King and Council by Sir *Theod. Mayerne* in the Year 1631. *MS.*

have made a particular Experiment, by cauſing ſome *Cotton* about ſix Months ſince to be placed near a piece of *putrefying Fleſh*, but without touching it; for the *Cotton* imbibed ſo ſtrong a Taint, that being put up in a cloſe Box, it retains its offenſive Scent to this very time.

As, all reaſonable Proviſions ſhould be made both for the *Sound* and *Sick*, who perform *Quarantaine*; ſo the ſtrict keeping of it ought to be inforced by the ſevereſt *Penalties*. And if a Ship comes from any Place, where the *Plague* raged, at the time of the Ship's Departure from it, with more than uſual Violence, it will be the ſecureſt Method to *burn* all the *Goods*, and even the *Ship*.

Nor ought this farther Caution to be omitted, that when the *Contagion*

tagion has ceaſed in any Place by the approach of Winter, it will not be ſafe to open a free Trade with it too ſoon; becauſe there are Inſtances of the *Diſtemper's* being ſtopt by the Winter Cold, and yet the Seeds of it not deſtroyed, but only kept unactive, till the Warmth of the following Spring has given them new Life and Force. Thus in the great *Plague* at *Genoa* near ſixty Years ago, which continued part of two Years, the firſt Summer about *Ten Thouſand* died; the Winter following hardly any; but the Summer after no leſs than *Sixty Thouſand*. Likewiſe the laſt *Plague* at *London* appeared the latter end of the Year 1664, and was ſtopt during the Winter by a hard Froſt of near three Month's Continuance; ſo that there remained no farther Appearance of it till the enſuing

Spring *. Now if Goods brought from ſuch a Place ſhould retain any of the latent *Contagion*, there will be danger of their producing the ſame Miſchief in the Place, to which they are brought, as they would have cauſed in that, from whence they came.

BUT above all, it is neceſſary, that the *Clandeſtine Importing* of Goods be puniſhed with the utmoſt Rigour; from which wicked Practice I ſhould at this time apprehend more danger of bringing the *Diſeaſe* from *France*, than by any other way whatſoever.

THESE are, I think, the moſt material Points, to which regard is to be had in defending our ſelves

* Hodges de Peſte.

againſt

againſt *Contagion* from other Countries. The particular manner of putting theſe Directions in Execution, as the *Viſiting* of *Ships*, *Regulation* of *Lazaretto's*, &c. I leave to proper Officers, who ought ſometimes to be aſſiſted herein by able Phyſicians.

CHAP. II.

Of Stopping the Progreſs of the Plague, if it ſhould enter our Country.

THE next Conſideration is, what to do in caſe, through a Miſcarriage in the publick Care, by the Neglect of Officers, or otherwiſe, ſuch a Calamity ſhould be ſuffered to befal us.

THERE

THERE is no *Evil* in the World, in which the great Rule of *Reſiſting the Beginning*, more properly takes Place, than in the preſent Caſe; and yet it has unfortunately happened, that the common Steps formerly taken have had a direct Tendency to hinder the putting *this Maxim* in Practice.

AS the *Plague* always breaks out in ſome particular Place, it is certain, that the Directions of the *Civil Magiſtrate* ought to be ſuch, as to make it as much for the Intereſt of Families to diſcover their Misfortune, as it is, when a Houſe is on *Fire*, to call in the Aſſiſtance of the Neighbourhood: Whereas, on the contrary, the Methods taken by the Publick, on ſuch Occaſions, have always had the Appearance of a ſevere *Diſcipline*, and even

Puniſhment,

Puniſhment, rather than of a *Compaſſionate Care*: Which muſt naturally make the *Infected* conceal the Diſeaſe as long as was poſſible.

THE main Import of the *Orders* iſſued out at theſe Times was *; As ſoon as it was found, that any Houſe was infected, to keep it ſhut up, with a *large red Croſs*, and theſe Words, *Lord have Mercy upon us*, painted on the Door; Watchmen attending Day and Night to prevent any one's going in or out, except ſuch *Phyſicians*, *Surgeons*, *Apothecaries*, *Nurſes*, *Searchers*, &c. as were allowed by Authority: And this to continue at leaſt a Month

* Vid. *Directions for the Cure of the* Plague *by the* College *of* Phyſicians; *and Orders of the* Lord Mayor *and* Aldermen *of* London; *publiſhed* 1665.

after

after all the Family was *dead* or *recovered*.

It is not eaſy to conceive a more diſmal Scene of Miſery, than this: Families lock'd up from all their Acquaintance, though ſeized with a Diſtemper which the moſt of any in the World requires Comfort and Aſſiſtance; abandoned it may be to the Treatment of an inhumane Nurſe (for ſuch are often found at theſe times about the Sick;) and Strangers to every thing but the melancholy Sight of the Progreſs, Death makes among themſelves; with ſmall Hopes of Life left to the Survivers, and thoſe mixed with Anxiety and Doubt, whether it be not better to die, than to prolong a miſerable Being, after the Loſs of their beſt Friends, and neareſt Relations.

If *Fear*, *Deſpair*, and all *Dejection of Spirits*, diſpoſe the Body to receive *Contagion*, and give it a great Power, where it is received, as all Phyſicians agree they do, I don't ſee how a Diſeaſe can be more enforced than by ſuch a Treatment.

Nothing can juſtify ſuch *Cruelty*, but the Plea, that it is for the Good of the whole *Community*, and prevents the ſpreading of *Infection*. But this upon due Conſideration will be found quite otherwiſe: For while *Contagion* is kept nurſed up in a Houſe, and continually encreaſed by the daily Conqueſts it makes, it is impoſſible but the *Air* ſhould become tainted in ſo eminent a degree, as to ſpread the *Infection* into the Neighbourhood upon the firſt Outlet. The ſhutting up Houſes in

this

this Manner is only keeping ſo many *Seminaries* of *Contagion*, ſooner or later to be diſperſed abroad: For the waiting a Month, or longer, from the Death of the laſt Patient, will avail no more, than keeping a *Bale* of infected *Goods* unpack'd; the Poyſon will fly out, whenever the *Pandora's Box* is opened.

As theſe Meaſures were owing to the Ignorance of the true Nature of *Contagion*, ſo they did, I firmly believe, contribute very much to the long Continuance of the *Plague*, every time they have been practiſed in this City: And, no doubt, they have had as ill Effects in other Countries.

It is therefore no wonder, that great Complaints were ſometimes made here againſt this unreaſonable Uſage; which, when they prevailed

ſo

ſo far, as to procure ſome Releaſe for the *Sick*, were remarkably followed with an Abatement of the Diſeaſe. The *Plague* in the Year 1636 began with great Violence, but leave being given by the King's Authority for People to quit their Houſes; it was obſerved, That *not one in twenty of the well Perſons removed fell ſick, nor one in ten of the Sick died**. Which ſingle Inſtance alone, had there been no other, ſhould have been of Weight ever after to have determined the Magiſtracy againſt too ſtrict Confinements. But beſides this, a preceding *Plague*, *viz.* in the Year 1625, affords us another Inſtance of a very remarkable Decreaſe upon the diſcontinuing to *ſhut up* Houſes. It was indeed ſo late in the Year, before this was done, that the near

* Diſcourſe upon the Air, by *Tho. Cock.*

Approach

Approach of Winter was doubtleſs one Reaſon for the Diminution of the Diſeaſe, which followed: Yet this was ſo very great, that it is at leaſt paſt diſpute, that the Liberty then permitted was no Impediment to it: For this *opening* of the Houſes was allowed of in the beginning of *September*; and whereas the laſt Week in *Auguſt*, there died no leſs than four thouſand two hundred and eighteen, the very next Week the *Burials* were diminiſhed to three thouſand three hundred and forty four, and in no longer time than to the fourth Week after, to eight hundred and fifty two *.

SINCE therefore the Management in former Times neither anſwers the Purpoſe of *diſcovering the*

* Vid. The ſhutting up of Houſes ſoberly debated, *Anno* 1665.

Beginning

Beginning of the *Infection*, nor of putting a ſtop to it when *diſcovered*, other Meaſures are certainly to be taken; which I think ſhould be of this Nature.

THERE ought, in the firſt place, *a Council of Health* to be eſtabliſhed, conſiſting of ſome of the principal Officers of State, both Eccleſiaſtical and Civil, ſome of the chief Magiſtrates of the City, two or three Phyſicians, *&c.* And this *Council* ſhould be intruſted with ſuch Powers, as might enable them to ſee all their Orders executed with impartial Juſtice, and that no unneceſſary Hardſhips, under any Pretence whatever, be put upon any by the Officers they employ.

INSTEAD of *ignorant old Women*, who are generally appointed *Searchers* in Pariſhes to enquire what

Diſeaſes People die of, that *Office* ſhould be committed to *Underſtanding and Diligent Men*, whoſe Buſineſs it ſhould be, as ſoon as they find any have dy'd after an uncommon Manner, particularly with *livid Spots*, *Buboes*, or *Carbuncles*, to give Notice thereof to the *Council of Health*, who ſhould immediately ſend ſkilful Phyſicians to examine the ſuſpected Bodies, and to viſit the Houſes in the Neighbourhood, eſpecially of the *poorer* ſort, among whom this Evil generally begins; and if upon their Report it appears, that a *Peſtilential Diſtemper* is broke out, they ſhould without delay order all the Families, in which the Sickneſs is, to be *removed*; the *Sick* to different Places from the *Sound*; but the Houſes for both ſhould be three or four Miles out of Town; and the *Sound* People ſhould be *ſtript of all their Clothes*, and *waſhed* and

ſhaved,

ſhaved, before they go into their new Lodgings. Theſe Removals ought to be made in the Night, when the Streets are clear of People, which will prevent all danger of ſpreading the Infection. And beſides, all poſſible Care ſhould be taken to provide ſuch Means of Conveyance for the *Sick*, that they may receive no Injury.

As this Management is neceſſary with reſpect to the *Poor* and *meaner* ſort of People; ſo the *Rich*, who have Conveniences, may, inſtead of being carried to *Lazarettoes*, be obliged to go to their Country-Houſes; provided that Care be always taken to keep the *Sound* ſeparated from the *Infected*. And at the ſame time all the Inhabitants who are yet well, ſhould be permitted, nay encouraged to leave

the Town, which, the thinner it is, will be the more healthy.

No manner of *Compaſſion* and *Care* ſhould be wanting to the *Diſeaſed*; to whom, when lodged in *clean* and *airy* Habitations, there would, with due Cautions, be no great danger in giving Attendance. All Expences ſhould be paid by the Publick, and no Charges ought to be thought great, which are counterbalanced with the ſaving a Nation from the greateſt of Calamities. Nor does it ſeem to me at all unreaſonable, that a *Reward* ſhould be given to the Perſon, that makes the firſt Diſcovery of *Infection* in any Place; ſince it is undeniable, that the making known the *Evil* to thoſe, who are provided with proper Methods againſt it, is the firſt and main Step towards the overcoming it.

ALTHOUGH the Methods taken in other Countries, as well as in our own, have generally been different from what we have here recommended, yet there are not wanting ſome Inſtances of extraordinary Succeſs attending theſe Meaſures, whenever they have happened to be put in Practice.

THE Magiſtrates of the City of *Ferrara* in *Italy* in the Year 1630, when all the Country round about them was infected with the *Plague*, obſerving the ill Succeſs of the Conduct of their Neighbours, who, for fear of loſing their Commerce, did all they could to conceal the Diſeaſe, by keeping the Sick in their Houſes, reſolved, whenever occaſion ſhould require, to take a different Method. Accordingly, as ſoon

as they received Information, that one had died in their City of the *Peſtilence*, they immediately removed the whole Family he belonged to into a *Lazaretto*, where all, being ſeven in Number, likewiſe died. But though the Diſeaſe was thus malignant, it went no farther, being ſuppreſſed at once by this Method. Within the Space of a Year the ſame Caſe returned ſeven or eight times, and this Management as often put a Stop to it. The Example of this *City* was afterwards followed more than once by ſome other Towns in the ſame Territory with ſo good Succeſs, that it was thought expedient, for the common Good, to publiſh in the *Memoirs* of the People of *Ferrara* this Declaration, *That the only Remedy againſt the Plague is to make the moſt early Diſcovery of it, that is poſſible*

ble, and thus to extinguiſh it in the very beginning *.

No leſs remarkable than this Occurrence at *Ferrara*, is what happened at *Rome* in the *Plague*, I have taken notice of before, in the Year 1657. When the Diſeaſe had ſpread itſelf among both Rich and Poor, and raged in the moſt violent manner, the *Pope* appointed Cardinal *Gaſtaldi* Commiſſary General of Health, giving him for a time the Power of the whole *Sacred College*, with full Commiſſion to do whatever he ſhould judge neceſſary. Hereupon he gave ſtrict Orders, that no ſick or ſuſpected Perſons ſhould ſtay in their own Houſes. The *Sick* he removed, upon the firſt Notice, to a *Lazaretto* in the *Iſland* of the *Tyber*; and all who

* Muratori governo della Peſte, lib. 1. c. 5.

were in the ſame Houſes with them to other *Hoſpitals* juſt without the City, in order to be ſent to the *Iſland*, if they ſhould fall ſick. At the ſame time he took diligent care to ſend away their *Goods* to an airy Place to be cleanſed. He executed theſe Regulations with ſo much Strictneſs, that no Perſons of the higheſt Quality were exempted from this Treatment, which occaſioned at firſt great Complaints againſt the *Cardinal* for his Severity; but ſoon after he had general Thanks: For in two Months time, by this means, he entirely cleared the City of the *Peſtilence*, which had continued in it almoſt two Years. And it was particularly obſerved, that whereas before, when once the Diſeaſe had got into a Houſe, it ſeldom ended without ſeizing the whole Family; in this Management ſcarce five out of an hundred

of

of the ſound Perſons removed were infected *.

I CANNOT but take notice, that the *Plague* was ſtop'd at *Marſeilles* a full Fortnight by the ſame Meaſures, and probably might have been wholly extinguiſhed, had not new Force been given it by the unſeaſonable Confidence of the Inhabitants upon this Intermiſſion; which, we are informed, was ſo great, that they would not believe the *Peſtilence* had been at all among them, and publickly upbraided the Phyſicians and Surgeons for frighting them cauſleſly †. At this time, no doubt, they muſt have neglected the Cautions neceſſary for their Security ſo much, as to leave us no room to be ſurprized, that the Diſeaſe ſhould after this break out a-

* Cardin. Gaſtaldi de avertendâ Peſte, c. 10.
† Journal de ce qui s'eſt paſſé en Marſeille, p. 9, 10, 11.

gain

gain with too great Violence to be a ſecond time overcome.

But, beſides theſe Examples in foreign Countries, we have one Inſtance of the ſame Nature nearer home. When the *Plague* was laſt here in *England*, upon its firſt Entrance into *Poole* in *Dorſetſhire*, the Magiſtrates immediately ſuppreſs'd it, by removing the *Sick* into *Peſt-Houſes*, without the Town, as is well remember'd there to this time. A very remarkable Occurrence has greatly contributed towards preſerving all the Circumſtances of this Tranſaction in Memory. They found ſome difficulty in procuring any one to attend upon the *Sick* after their Removal, which obliged the Town to engage a *young Woman*, then under Sentence of Death, in that Service, on a Promiſe to uſe their Intereſt for

obtaining

obtaining her Pardon. The young Woman eſcaped the Diſeaſe, but neglecting to ſolicite the Corporation for the Accompliſhment of their Engagement with her, three or four Months after ſhe was barbarouſly hanged by the *Mayor* upon a Quarrel between them.

I WOULD have it here obſerved, that as the Advice I have been giving is founded upon this Principle, that the beſt Method for ſtopping Infection, is to ſeparate the *Healthy* from the *Diſeaſed*; ſo in ſmall Towns and Villages, where it is practicable, if the *Sound* remove themſelves into *Barracks*, or the like airy Habitations, it may probably be even more uſeful, than to remove the *Sick*. This Method has been found beneficial in *France* after all others have failed. But the Succeſs of this proves the Method

of

of *Removing the Sick*, where this other cannot be practiſed, to be the moſt proper of any.

When the *ſick Families* are gone, all the Goods of the Houſes, in which they were, ſhould be *burnt*, or rather *buried* deep under Ground, eſpecially if a very airy and open Place cannot eaſily be had to burn them in; becauſe in a cloſe Place ſome infectious Particles may poſſibly be diſperſed by the Smoak through the Neighbourhood: According to what *Mercurialis* relates, that the *Plague* in *Venice* was augmented by burning a large Quantity of infected Goods in the City*. And moreover the Houſes themſelves may likewiſe be deſtroyed by Fire, if that can conveniently be done; that is, if they are remote

* De Peſtilent. cap. 21.

enough

enough from others; otherwiſe it may ſuffice to have 'em thoroughly cleanſed, and then plaſtered up. And after this, all poſſible Care ought ſtill to be taken to remove whatever Cauſes are found to breed and promote *Contagion*. In order to this, the *Overſeers* of the Poor (who might be aſſiſted herein by other Officers) ſhould viſit the Dwellings of all the meaner ſort of the Inhabitants, and where they find them *ſtifled up too cloſe* and *naſty*, ſhould leſſen their Number by ſending ſome into better Lodgings, and ſhould take Care, by all manner of Proviſion and Encouragement, to make them more *cleanly* and *ſweet*.

No good Work carries its own Reward with it ſo much as this kind of *Charity*; and therefore, be the Expence what it will, it muſt never

be

be thought unreasonable. For nothing approaches so near to the first Original of the *Plague*, as Air pent up, loaded with Damps, and corrupted with the Filthiness, that proceeds from *Animal Bodies*.

Our *common Prisons* afford us an Instance of something like this where very few escape, what they call the *Goal Fever*, which is always attended with a Degree of *Malignity* in Proportion to the *Closeness* and *Stench* of the Place: And it would certainly very well become the Wisdom of the Government, as well with regard to the Health of the *Town*, as in Compassion to the *Prisoners*, to take Care, that all *Houses of Confinement* should be kept as airy and clean, as is consistent with the Use, to which they are designed.

THE *Black Aſſize* at *Oxford*, held in the Caſtle there in the Year 1577, will never be forgot *; at which the *Judges*, *Gentry*, and almoſt all that were preſent, to the Number of three hundred, were killed by a *poyſonous Steam*, thought by ſome to have broken forth from the *Earth*; but by a *noble* and *great* Philoſopher † more juſtly ſuppoſed to have been brought by the *Priſoners* out of the *Goal* into *Court*; it being obſerved, that they alone were not injured by it.

AT the ſame time, that this Care is taken of *Houſes*, the proper Officers ſhould be ſtrictly charged to ſee that the *Streets* be waſhed and kept clean from *Filth*, *Carrion*,

* Camden. Annal. Regin. Elizab.

† Lord *Verulam*, Natural Hiſtory, Cent. 10. Num. 194.

and

and all manner of *Nuſances*; which ſhould be carried away in the *Night Time*; nor ſhould the *Layſtalls* be ſuffered to be too near the City. *Beggars* and *idle Perſons* ſhould be taken up, and ſuch miſerable Objects, as are neither fit for the common *Hoſpitals*, nor *Work-Houſes*, ſhould be provided for in an *Hoſpital of Incurables*.

ORDERS indeed of this kind are neceſſary to be obſerved at all times, eſpecially in populous Cities; and therefore I am ſorry to take Notice, that in theſe of *London* and *Weſtminſter* there is no good *Police* eſtabliſhed in theſe Reſpects; for want of which the Citizens and Gentry are every Day annoyed more ways than one.

IF theſe early *Precautions*, we have mentioned, prove ſucceſsful, there

there will be no need of any Methods for *Correcting the Air*, *Purifying Houſes*, or of *Rules for preſerving particular Perſons from Infection*: To all which, if the *Plague* get head, ſo that the *Sick* are too many to be removed, regard muſt be had.

As to the *firſt*; *Fire* has been almoſt univerſally recommended for this Purpoſe, both by the Ancients and Moderns; who have adviſed to make frequent and numerous *Fires* in the Towns infected. This *Precept*, I think, is almoſt entirely founded upon a Tradition, that *Hippocrates* put a ſtop to a *Plague* in *Greece* by this means. But it is to be obſerved, that there is no mention made of any thing like it in the Works of *Hippocrates*. The beſt Authority we have for it, is the Teſtimony of *Galen*, though it

is alſo mentioned by other Authors. *Galen*, recommending *Theriaca* againſt the *Peſtilence*, has thought fit, it ſeems, to compare it to *Fire*, and, upon this Conceit, relates, that *Hippocrates* cured a *Plague*, which came from *Æthiopia* into *Greece*, by purifying the Air with *Fires*; into which were thrown ſweet-ſcented Herbs, and Flowers, together with Ointments of the fineſt Flavour. It is remarkable, that among the *Epiſtles* aſcribed to *Hippocrates*, which, though not genuine, yet are older than *Galen*, there is a *Decree* ſaid to be made by the *Athenians* in Honour of this Father of Phyſicians, which, making mention of the Service he had done his Country in a *Plague*, ſays only, that he ſent his Scholars into ſeveral Parts, with proper Inſtructions to cure the Diſeaſe. By which it ſhould ſeem, that this Story of the *Fires* was hard-

ly or not at all known at the time, when these *Letters* were compiled. And *Soranus* may yet more confirm us, that it was framed long after the Death of *Hippocrates*; for *Soranus* only says in general, that *Hippocrates* foretold the coming of the *Pestilence*, and took care of the Cities of *Greece*, without any mention of his having used this particular Expedient. *Plutarch* indeed speaks of a Practice like this as commonly approved among Physicians, which he makes use of to illustrate a certain Custom of the *Egyptians*; of whom he says, that they *purify* the Air by the Fumes of *Resin* and *Myrrh*, as Physicians correct the Foulness, and attenuate the Thickness thereof in Times of *Pestilence*, by *burning Sweet-Woods*, *Juniper*, *Cypress* *, &c.

* Plutarch. lib. de Iſid. & Oſir.

THIS I take to be the Sum of what can be learned from Antiquity in relation to this Point; from whence we may ſee, that Writers have concluded a little too haſtily for the uſe of *common Fires* in this Caſe, upon the Authority and Example of *Hippocrates*, though we ſhould allow the Fact as related by *Galen*; when it will not from thence appear that *Hippocrates* himſelf relied upon them; ſince he thought it neceſſary to take in the Aſſiſtance of *aromatic Fumes*. But as this Fact is not grounded upon ſufficient Authority, ſo it is needleſs to inſiſt long upon it. The Paſſage I have brought from *Plutarch* will better explain what was the Sentiment of thoſe Phyſicians who approved the Practice. It ſeems they expected from thence to diſpel the Thickneſs and Foulneſs of the Air. And no

doubt

doubt but ſuch evil Diſpoſitions of the Air, as proceed from *Damps*, *Exhalations*, and the like, may be corrected even by *common Fires*, and the Prediſpoſition of it from theſe Cauſes to receive Infection ſometimes removed. But I think this Method, if it be neceſſary, ſhould be put in Practice before the coming of the *Peſtilence*. For when the Diſtemper is actually *begun*, and rages, ſince it is known to be *ſpread* and *increaſed* by the *Heat* of the *Summer*, and on the contrary checked by the *Cold* in *Winter*; undoubtedly, whatever increaſes that *Heat*, will ſo far add Force to the Diſeaſe: as *Mercurialis* takes notice, that *Smiths*, and all thoſe who worked at the *Fire*, were moſt ſeverely uſed in the *Plague* at *Venice* in his time *. Whether the Service *Fires* may do by correcting any

* De Peſt. c. 22.

other ill Qualities of the Air, will counterbalance the Inconvenience upon this Account, Experience only can determine; and the fatal Succeſs of the Trials made here in the laſt *Plague*, is more than ſufficient to diſcourage any farther Attempts of this Nature; for *Fires* being ordered in all the *Streets* for three Days together, there died in one Night following no leſs than four thouſand (if we may believe Dr. *Hodges*;) whereas in any ſingle Week before or after, never twice that Number were carried off *. And we find that the ſame Experiment was made in the laſt *Plague* at *Marſeilles* without any good Effect †.

* Hodges de Peſte, pag. 44.

† Journal de ce qui s'eſt paſſé a Marſeille, pap. 19.

WHAT has been ſaid of *Fires*, is likewiſe to be underſtood of *Firing of Guns*, which ſome have too raſhly adviſed. The proper Correction of the Air would be to make it *freſh* and *cool*: Accordingly the *Arabians* *, who were beſt acquainted with the Nature of *Peſtilences*, adviſe People to keep themſelves as *airy* as poſſible, and to chuſe Dwellings expoſed to the Wind, ſituate high, and refreſhed with running Waters.

As for *Houſes*, the firſt Care ought to be to keep them *clean*; for as *Naſtineſs* is a great Source of *Infection*, ſo *Cleanlineſs* is the greateſt Preſervative; which ſhews us the true Reaſon, why the *Poor* are moſt

* Rhazes de re Medica, lib. 4. c. 24. & Avicenn. Can. Med. lib. 4. c. 1.

obnoxious to *Contagious Diſeaſes*. It is remarked of the *Perſians*, that though their Country is ſurrounded every Year with the *Plague*, they ſeldom or never ſuffer any thing by it themſelves; and it is likewiſe known, that they are the moſt *cleanly* People of any in the World, and that many among them make it a great Part of their Religion to remove *Filthineſs* and *Nuſances* of every Kind from all Places about their Cities and Dwellings *.

Besides this, the *Arabians* adviſe the keeping Houſes *cool*, as another Method for their *Purification*; and therefore, to anſwer this End more fully, they directed to ſtrew them with *cooling* Herbs, as *Roſes*, *Violets*, *Water-Lillies*, &c. and to be

* Gaudereau Relation des Eſpèces de la Peſte que reconnoiſſent les Orientaux.

waſhed

waſhed with *Water* and *Vinegar*; than all which, eſpecially the laſt, nothing more proper can be propoſed. I think it not improper likewiſe to *fume* Houſes with *Vinegar*, either alone or together with *Nitre*, by throwing it upon a *hot Iron* or *Tile*; though this be directly contrary to what modern Authors moſtly adviſe, which is to make Fumes with hot things, as *Benzoin*, *Frankincenſe*, *Storax*, &c. from which I ſee no reaſon to expect any Virtue to deſtroy the Matter of *Infection*, or to keep particular Places from a Diſpoſition to receive it; which are the only things here to be aimed at. The *Smoak* of *Sulphur*, perhaps, as it abounds with an *acid Spirit*, which is found by Experience to be very *penetrating*, and to have a great Power to repreſs *Fermentations*, may promiſe ſome Service this way.

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As hot Fumes appear to be generally *useless*, so the Steams of *poisonous Minerals* ought to be suspected as *dangerous*; and therefore I cannot but dissuade the use of all *Fumigations* with *Mercury* or *Arsenic*: Much less would I advise, as some have done, the wearing *Arsenic* upon the *Pit* of the *Stomach* as an *Amulet*; since this Practice has been often attended with very ill Consequences, and is not grounded upon any good Authority, but probably derived from an Error in mistaking the *Arabian* Word *Darsini*, which signifies *Cinnamon*, for the *Latin de Arsenico*, as I have formerly shewn *.

The next thing after the *Purifying of Houses*, is to consider by what Means particular *Persons* may

* Mech. Account of Poysons, Essay III.

best

beſt defend themſelves againſt *Contagion*; for the certain doing of which, it would be neceſſary to put the *Humours* of the *Body* into ſuch a State, as not to be alterable by the *Matter of Infection*. But ſince this is no more to be hoped for, than a *Specific Preſervative* from the *Small-Pox*; the moſt that can be done, will be to keep the Body in ſuch Order, that it may ſuffer as little as poſſible. The *firſt Step* towards which, is to maintain a good State of Health, in which we are always leaſt liable to ſuffer by any external Injuries; and not to weaken the Body by Evacuations. The *next* is, to guard againſt all *Dejection of Spirits*, and *immoderate Paſſions*; for theſe we daily obſerve do expoſe Perſons to the more common *Contagion* of the *Small-Pox*. Theſe Ends will be beſt anſwered by living with Temperance upon a good ge-

nerous

nerous Diet, and by avoiding *Faſtings*, *Watchings*, *extreme Wearineſs*, &c. *Another* Defence is, to uſe whatever Means are proper to keep the *Blood* from *Inflaming*. This, if it does not ſecure from *contracting Infection*, will at leaſt make the *Effects* of it leſs violent. The moſt proper Means for this, according to the Advice of the *Arabian* Phyſicians, is the repeated Uſe of *acid Fruits*, as *Pomegranates*, *Sevil Oranges*, *Lemons*, *Tart Apples*, &c. But above all, of *Wine Vinegar* in ſmall Quantities, rendered grateful to the Stomach by the Infuſion of ſome ſuch Ingredients as *Gentian Root*, *Galangal*, *Zedoary*, *Juniper Berries*, &c. Which Medicines by correcting the *Vinegar*, and taking off ſome ill Effects it might otherwiſe have upon the Stomach, will be of good Uſe: But theſe, and all other hot *aromatic* Drugs, though much

much recommended by Authors, if uſed alone, are moſt likely to do hurt by *over-heating* the Blood.

I CANNOT but recommend likewiſe the Uſe of *Iſſues*: The propereſt Place for them, I take to be the inſide of the Leg a little above the Knee. Beſides, the ſmoaking *Tobacco*, much applauded by ſome, ſince it may be put in Practice without any great Inconvenience, need not, I think, be neglected.

BUT ſince none of theſe Methods promiſe any certain Protection; as *leaving* the Place infected is the ſureſt *Preſervative*, ſo the next to it, is to avoid, as much as may be, the *near Approach* to the *Sick*, or to ſuch as have but *lately recovered*. For the greater Security herein, it will be adviſeable to avoid all *Crouds of People*. Nay, it

ſhould

ſhould be the Care of the *Magiſtrate* to prohibit all unneceſſary *Aſſemblies*; and likewiſe to oblige all, who get over the Diſeaſe, to *confine* themſelves for ſome time, before they appear abroad.

THE Advice to keep at a Diſtance from the *Sick*, is alſo to be underſtood of the *Dead Bodies*; which ſhould be *buried* at as great a Diſtance from Dwelling-Houſes, as may be; put *deep* in the Earth, and *covered* with the exacteſt Care. They ſhould likewiſe be *carried out* in the *Night*, while they are yet freſh and free from *Putrefaction*: Becauſe a Carcaſs not yet beginning to corrupt, if kept from the Heat of the Day, hardly emits any kind of Steam or Vapour.

As for thoſe, who muſt of neceſſity attend the Sick, ſome far-

ther

ther Directions ſhould be added for their Uſe. Theſe may be comprehended in two ſhort Precepts. *One* is, not to *ſwallow their Spittle* while they are about the *Sick*, but rather to *ſpit* it out: *The other*, not ſo much as to *draw in their Breath*, when they are very near them. The reaſon for both theſe appears from what has been ſaid above concerning the Manner, in which a ſound Perſon receives the Infection. But in caſe it be too difficult conſtantly to comply with theſe *Cautions*, *waſhing* the *Mouth* frequently with *Vinegar*, and *holding* to the *Noſtrils* a *Sponge* wet with the ſame, may in ſome meaſure ſupply their Place.

THIS is the Sum of what I think moſt likely to ſtop the Progreſs of the *Diſeaſe* in any Place, where it ſhall have got Admittance. If ſome

few

few of theſe Rules refer more particularly to the City of *London*, with ſmall Alteration they may be applied to any other *Place*. It now remains therefore only to lay down ſome Directions to hinder the Diſtemper's ſpreading from *Town* to *Town*. The beſt Method for which, where it can be done, (for this is not practicable in very great Cities) is to caſt up a *Line* about the *Town infected*, at a convenient Diſtance; and by placing a *Guard*, to hinder People's paſſing from it without due Regulation, to other Towns: But not abſolutely to forbid any to withdraw themſelves, as they now do in *France*, according to the uſual Practice abroad; which is an unneceſſary Severity, not to call it a Cruelty. I think it will be enough, if all, who deſire to paſs the *Line*, be permitted to do it, upon Condition they firſt perform

Quarantaine

Quarantaine for about twenty Days in *Tents*, or other more convenient *Habitations*. But the greateſt care muſt be taken, that none paſs without conforming themſelves to this Order, both by keeping diligent *Watch*, and by *puniſhing*, with the utmoſt Severity, any that ſhall either have done ſo, or attempt it. And the better to diſcover *ſuch*, it will be requiſite to oblige all, who travel in any Part of the Country, under the ſame Penalties, to carry with them *Certificates* either of their coming from Places not *infected*, or of their paſſing the *Line* by Permiſſion.

THIS I take to be a more effectual Method to keep the *Infection* from ſpreading, than the abſolute refuſing a Paſſage to People upon any Terms. For when Men are in ſuch imminent Danger of their Lives, where they are, many, no

doubt, if not otherwiſe allowed to eſcape, will uſe Endeavours to do it ſecretly, let the Hazard be ever ſo great. And it can hardly be, but ſome will ſucceed in their Attempts, as we ſee it has often happen'd in *France*, notwithſtanding all their Care. But one that gets off thus clandeſtinely, will be more likely to carry the Diſtemper with him, than twenty, nay a hundred, that go away under the preceding Reſtrictions: Eſpecially becauſe the *Infection* of the Place, he flies from, will by this Management be rendered much more intenſe. For confining People, and ſhutting them up together in great Numbers, will make the Diſtemper rage with augmented Force, even to the increaſing it beyond what can be eaſily imagined, as appears from the Account which the learned *Gaſſendus* *

* Natus Eccleſiæ Dienſis.

has given us of a memorable *Plague*, which happened at *Digne* in *Provence*, where he lived, in the Year 1629. This was so terrible, that in one *Summer*, out of *ten thousand* Inhabitants, it left but *fifteen hundred*, and of them all but *five* or *six* had gone through the *Disease*. And he assigns *this*, as the principal Cause of the great Destruction, that the Citizens were too closely confined, and not suffered so much as to go to their Country-Houses. Whereas in another *Pestilence*, which broke out in the same Place a Year and an half after, more Liberty being allowed, there did not die above *one hundred* Persons.

For these Reasons, I think, to allow People with proper *Caution* to remove from an infected Place, is the best Means to suppress the *Contagion*, as well as the most humane

mane Treatment of the preſent Sufferers: And, under theſe Limitations, the Method of *inveſting* Towns infected, which is certainly the moſt proper, that can be adviſed, to keep the Diſeaſe from ſpreading, will be no Inconvenience to the Places *ſurrounded*. On the contrary, it will rather be uſeful to them, ſince the Guard may eſtabliſh ſuch *Regulations* for the Safety of thoſe, who ſhall bring Proviſions, as ſhall remove the Fears, which might otherwiſe diſcourage them.

THE ſecuring againſt all Apprehenſions of this Kind, is of ſo great Importance, that in *Cities* too large to be inveſted, as, for Example, this City of *London*, the *Magiſtrates* muſt uſe all poſſible Diligence to ſupply this Defect, not only by ſetting up *Barriers* without their City, but by making it in the

the moſt particular manner their Care to appoint ſuch *Orders* to be obſerved at them, as they ſhall judge will be moſt ſatisfactory to the Country about.

THOUGH Liberty ought to be given to the *People*, yet no ſort of *Goods* muſt by any means be ſuffered to be carried over the *Line*, which are made of *Materials* retentive of *Infection*. For in the preſent Caſe, when *Infection* has ſeized any Part of a Country, much greater Care ought to be taken, that no *Seeds* of the *Contagion* be conveyed about, than when the Diſtemper is at a great Diſtance; becauſe a *Bale of Goods*, which ſhall have imbibed the *Contagious Aura* when pack'd up in *Turkey*, or any remote Parts, when unpack'd here, may chance to meet with ſo healthful a Temperament of our Air, that it

ſhall not do much hurt. But when the Air of any one of our Towns ſhall be ſo corrupted, as to maintain and ſpread the *Peſtilence* in it, there will be little reaſon to believe, that the Air of the reſt of the Country is in a much better State.

For the ſame Reaſon *Quarantaines* ſhould more ſtrictly be enjoined, when the *Plague* is in a bordering Kingdom, than when it is more remote.

The Advice here given with reſpect to *Goods*, is not only abundantly confirmed from the Proofs I have given above, that *Goods* have a Power of ſpreading *Contagion* to diſtant Places; but might be farther illuſtrated by many Inſtances of ill Effects from the Neglect of this Caution in Times of the *Plague*. I ſhall mention two, which happen'd

among

among us during the last *Plague*. I have had occasion already to observe, that the *Plague* was in *Poole*. It was carried to that Place by some *Goods* contained in a *Pedlar's Pack*. The *Plague* was likewise at *Eham* in the Peak of *Derbyshire*, being brought thither by means of a Box sent from *London* to a Taylor in that Village, containing some Materials relating to his Trade. There being several Incidents in this latter Instance, that will not only serve to establish in particular the Precepts I have been giving, in relation to Goods, but likewise all the rest of the Directions, that have been set down, for stopping the Progress of the *Plague* from one Town to another; I shall finish this Chapter with a particular Relation of what passed in that Place. A Servant, who first opened the foresaid Box, complaining that the Goods

were damp, was ordered to dry them at the Fire; but in doing it, was ſeized with the *Plague*, and died; the ſame Misfortune extended itſelf to all the reſt of the Family, except the Taylor's Wife, who alone ſurvived. From hence the Diſtemper ſpread about and deſtroyed in that Village, and the reſt of the Pariſh, though a ſmall one, between two and three hundred Perſons. But notwithſtanding this ſo great Violence of the Diſeaſe, it was reſtrained from reaching beyond that Pariſh by the Care of the Rector, from whoſe Son the preſent Rector, and another worthy Gentleman I have the Relation. This Clergyman adviſed, that the *Sick* ſhould be removed into *Hutts* or *Barracks* built upon the *Common*, and procuring by the Intereſt of the then Earl of *Devonſhire*, that the People ſhould be well furniſhed

with

with Proviſions, he took effectual Care, that no one ſhould go out of the Pariſh; and by this means he protected his Neighbours from Infection with compleat Succeſs.

I HAVE now gone through the chief Branches of *Preſervation* againſt the *Plague*, and ſhall conclude with ſome general Directions concerning the *Cure*.

CHAP. III.

Of the Cure of the Plague.

IT appears, from what has been ſaid in the beginning of this Diſcourſe, that the *Plague* and the *Small-Pox* are Diſeaſes, which bear a great Similitude to each other

ther, both being *Contagious Fevers* from *Africa*, and both attended with certain *Eruptions*. And as the *Eruptions* or *Puſtules* in the *Small-Pox* are of two Kinds, which has cauſed the Diſtemper to be divided into two Species, the *diſtinct* and *confluent*; ſo we have ſhewn two ſorts of *Eruptions* or *Tumors* likewiſe to attend the *Plague*. In the firſt and mildeſt Kind of the *Small-Pox* the *Puſtules* riſe high above the Surface of the Skin, and contain a digeſted *Pus*; but in the other, the *Puſtules* lie flat, and are filled with an indigeſted *Sanies*. The two kinds of critical *Tumors* in the *Plague* are yet more different. In the moſt favourable Caſe the *Morbific Matter* is thrown upon ſome of the ſofteſt *Glands* near the Surface of the Body, as upon the *inguinal*, *axillary*, *parotid*, or *maxillary* Glands; the firſt Appearance of which is a ſmall

Indu-

Induration, great Heat, Redneſs, and ſharp Pain near thoſe Glands. Theſe *Tumors*, if the Patient recover, like the *Puſtules* of the diſtinct *Small-Pox*, come to a juſt Suppuration, and thereby diſcharge the Diſeaſe. In worſe Caſes of the Diſtemper, either inſtead of theſe *Tumors*, or together with them, *Carbuncles* are raiſed: The firſt Appearance of them is a very ſmall indurated *Tumor*, not ſituate near any of the fore-mention'd Glands, with a duſky Redneſs, violent Heat, vaſt Pain, and a blackiſh *Spot* in the middle of the *Tumor*. This *Spot* is the beginning of a *Gangrene*, which ſpreads itſelf more and more as the *Tumor* increaſes.

But, beſides the Agreement in theſe critical Diſcharges, the two Diſtempers have yet a more manifeſt Likeneſs in thoſe *livid*

and

and *black Spots*, which are frequent in the *Plague*, and the Signs of ſpeedy Death; for the ſame are ſometimes found to attend the *Small-Pox* with as fatal a Conſequence; nay, I have ſeen Caſes, when almoſt every *Paſtule* has taken this Appearance. Moreover, in both Diſeaſes, when eminently malignant, Blood is ſometimes voided by the Mouth, by Urine, or the like *. And we may farther add, that in both Death is uſually cauſed by Mortifications in the *Viſcera*. This has conſtantly been found in the *Plague* by the Phyſicians in *France*; and I am convinced, from Accounts I have by me, of the Diſſection of a great many, who had died of the *Small-Pox*, that it is the ſame in that Diſtemper.

* Vid. Obſerv. & Reflex. ſur la Maladie de Marſeille, p. 133.

THIS

THIS Analogy between the two Diſeaſes, not only ſhews us, that we cannot expect to cure the *Plague* any more than the *Small-Pox*, by *Antidotes* and *Specific Medicines*, but will likewiſe direct us in the Cure of the Diſtemper, with which we are leſs acquainted, by the Methods found uſeful in the other Diſeaſe, which is more familiar to us.

IN ſhort, as in the *Small-Pox* the chief Part of the Management conſiſts in clearing the *Primæ Viæ* in the beginning; in regulating the Fever; and in promoting the natural Diſcharges; ſo in the *Plague* the ſame Indications will have place. The great difference lies in this, that in the *Plague* the Fever is often much more acute than in the other Diſtemper; the Stomach and Bowels are ſometimes inflamed; and the

Eruptions

Eruptions require external Applications, which to the *Puſtules* of the *Small-Pox* are ſeldom neceſſary.

When the Fever is very acute, a cool *Regimen*, commonly ſo beneficial in the *Small-Pox*, is here ſtill more neceſſary. But whenever the Pulſe is languid, and the Heat not exceſſive, moderate Cordials muſt be uſed.

The Diſpoſition of the Stomach and Bowels to be inflamed, makes *Vomiting* not ſo generally ſafe in the *Plague* as in the *Small-Pox*. The moſt gentle *Emetics* ought to be uſed, none better than *Ipecacuanha*; and great Caution muſt be had, that the Stomach or Bowels are not inflamed, when they are adminiſter'd; for if they are, nothing but certain Death can be expected from them: Otherwiſe at the beginning

ginning they will be always useful. Therefore upon the first Illness of the Patient it must carefully be considered, whether there appear any Symptoms of an Inflammation having seized these Parts; if there are any Marks of this, all *Vomits* must be omitted; if not, the Stomach ought to be gently moved.

The *Eruptions*, whether *glandulan Tumors*, or *Carbuncles*, must not be left to the Course of Nature, as is done in the *Small-Pox*; but all Diligence must be used, by external Applications, to bring them to *Suppurate*. Both these *Tumors* are to be treated in most respects alike. As soon as either of them appears, fix a *Cupping-Glass* to it without *scarifying*; and when that is removed, apply a *suppurative Cataplasm*, or *Plaster* of warm Gumms.

If the *Tumors* do not come to *Suppuration*, which the *Carbuncle* ſeldom or never does; but if a thin *Ichor* or Matter exudes through the Pores; or if the *Tumor* feel ſoft to the Touch; or laſtly, if it has a black *Cruſt* upon it, then it muſt be *opened* by *Inciſion*, either according to the length of the *Tumor*, or by a *crucial Section*. And if there is any Part *mortified*, as is uſually in the *Carbuncle*, it muſt be *ſcarified*. This being done, it will be neceſſary to ſtop the Bleeding, and dry up the *Moiſture* with an *actual Cautery*, dreſſing the Wound afterwards with *Doſſils*, and *Pledgits* ſpread with the common *Digeſtive* made with *Terebinth. cum Vitel. Ov.* and dip'd in a Mixture of two Parts of warmed Oil of *Turpentine*, and one Part of *Sp. Sal. Ammon.* or in *Balſ. Terebinth.*

rebinth. and over all muſt be put a *Cataplaſm* of *Theriac. Lond.*

THE next Day the Wound ought to be well *bathed* with a *Fomentation* made of warm *aromatic* Plants with Spirit of Wine in it, in order, if poſſible, to make the Wound digeſt, by which the *Sloughs* will ſeparate. After this the *Ulcer* may be treated as one from an ordinary *Abſceſs.*

FARTHER, in the *glandular Tumors*, when they ſuppurate, we ought not to wait, till the *Matter* has made its way to the outer Skin, but to open it as ſoon as it is riſen to any Bigneſs; becauſe theſe *Tumors* begin deep in the Gland, and often mortify, before the Suppuration has reached the Skin, as the Phyſicians in *France* have found upon diſſecting many dead Bodies.

THIS is the Method in which the *Plague* muſt be treated in following the natural Courſe of the Diſtemper. But the Patient in moſt Caſes runs ſo great Hazard in this way, notwithſtanding the utmoſt Care, that it would be of the greateſt Service to Mankind under this Calamity, if ſome artificial Diſcharge for the corrupted Humours could be found out, not liable to ſo great Hazard, as the natural way. To this purpoſe *large Bleeding* and *profuſe Sweating* are recommended to us upon ſome Experience.

DR. *Sydenham* tried both theſe Evacuations with good Succeſs, and has made two very judicious Remarks upon them. The *Firſt* is, that they ought not to be attempted unleſs in the beginning of the Sickneſs, before the natural Courſe of

of the Diſtemper has long taken Place; becauſe otherwiſe we can only expect to put all into Confuſion without any Advantage. His *other* Obſervation is, that we cannot expect any proſperous Event from either of theſe Evacuations, unleſs they are very copious; there being no Proſpect of ſurmounting ſo violent a Malignity without bolder Methods, than muſt be taken in ordinary Caſes.

As for *Bleeding*, by ſome late Accounts from *France*, I have been informed, that ſome of the Phyſicians there have carried this Practice ſo far, as upon the firſt Day of the Diſtemper to begin with bleeding about twelve Ounces, and then to take away four or five Ounces every two Hours after. They pretend to extraordinary Succeſs from this Method, with

the Aſſiſtance only of cooling *Ptiſanes*, and ſuch like Drinks, which they give plentifully at the ſame time. Such profuſe Bleeding as this may perhaps not ſuit with our Conſtitutions ſo well as with theirs; for in common Caſes they uſe this Practice much more freely than we: Yet we muſt draw Blood with a more liberal Hand than in any other Caſe, if we expect Succeſs from it. I ſhall excuſe my ſelf from defining exactly how large a Quantity of Blood is requiſite to be drawn, for want of particular Experience; but I think fit to give this Admonition, that, in ſo deſperate a Caſe as this, it is more prudent to run ſome hazard of exceeding, than to let the Patient periſh for want of due Evacuation.

As for *Sweating*, which is the other Method propoſed, it ought, no

no doubt, to be continued without Intermiſſion full twenty four Hours, as Dr. *Sydenham* adviſes. He is ſo particular in his Directions about it, that I need ſay little. I ſhall only add, that *Theriaca*, and the like ſolid Medicines, being offenſive to the Stomach, are not the moſt proper *Sudorifics*. I ſhould rather commend an Infuſion in boiling Water of *Virginia Snake-Root*, or in want of this, of ſome other warm *Aromatic*, with the Addition of about a fourth part of *Aqua Theriacalis*, and a proper Quantity of Syrup of Lemons to ſweeten it. From which, in Illneſſes of the ſame kind with the *Goal Fever*, which approaches the neareſt to the *Peſtilence*, I have ſeen very good Effects.

WHETHER either of theſe Methods, of *Bleeding*, or of *Sweating*, will

will anſwer the Purpoſe, intended by them, muſt be left to a larger Experience to determine; and the Trial ought by no means to be neglected, eſpecially in thoſe Caſes, which promiſe but little Succeſs from the natural Courſe of the Diſeaſe.

FINIS.